MONKEY
LANSING



[redacted] criteria
active

? 14 of 55 according to

16 with titers under $10^3$
range 1.9 to 2.9

# TEST FOR LANSING ANTIVIRAL ACTIVITY IN SERA OF NORMAL CYNOMOLGUS MONKEYS

| CYNOMOLGUS SERUM TESTED | DATE OF TEST | LOG OF FINAL DILUTION OF VIRUS IN MIXTURE | | | | LOG $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| VIRUS CONTROL | 10-10-50 | — | 7/7 | 8/8 | 0/8 | 3.5 | |
| | 10-11-50 | — | 8/8 | 5/8 | 1/6 | 3.3 | |
| | 10-13-50 | — | 7/8 | 7/8 | 3/8 | 3.6 | |
| | 10-16-50 | — | 20/20 | 15/20 | 2/20 | 3.4 | |
| | 12-28-50 | — | 8/8 | 6/8 | 2/8 | 3.5 | |
| | 12-29-50 | — | 8/8 | 6/8 | 5/7 | 4.1 | |
| | 1-10-51 | — | 7/7 | 8/8 | 5/7 | 4.3 | |
| | 1-11-51 | — | 8/8 | 8/8 | 2/8 | 3.7 | |
| | 1-16-51 | — | 8/8 | 5/8 | 3/8 | 3.5 | |
| | 1-17-51 | — | 7/8 | 5/8 | 3/8 | 3.5 | |
| | 1-18-51 | — | 8/8 | 3/8 | 3/8 | 3.1 | |
| | CUMULAT. | — | 96/98 | 76/100 | 29/96 | 3.5 | |
| CYNOMOLGUS # | | | | | | | |
| 1588 | 10-10-50 | 8/8 | 8/8 | 7/8 | — | 3.4 | |
| 1561 | 10-10-50 | 7/7 | 8/8 | 7/7 | — | 3.5 | |
| 1562 | 10-10-50 | 8/8 | 8/8 | 6/8 | — | 3.3 | |
| 1564 | 10-10-50 | 8/8 | 3/6 | 6/8 | — | 3.1 | |
| 1566 | 10-10-50 | 8/8 | 8/8 | 7/8 | — | 3.4 | |
| 1568 | 10-11-50 | 7/8 | 8/8 | 6/8 | — | 3.2 | |
| 1569 | " | 6/8 | 7/8 | 6/7 | — | 3.2 | |
| + 1572 | " | 5/8 | 5/8 | 2/8 | — | 2.4 | |
| 1575 | " | 7/8 | 5/8 | 5/8 | — | 2.8 | |
| + 1579 | " | 5/7 | 5/8 | 3/7 | — | 2.4 | |

| | CYNOMOLGUS SERUM TESTED | DATE OF TEST | LOG OF FINAL DILUTION OF VIRUS IN MIXTURE | | | LOG $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | | 1.6 | 2.3 | 3.0 | | |
| + | 1581 | 10-13-50 | 8/8 | 4/8 | 2/7 | 2.5 | |
| + | 1573 | " | 7/8 | 5/8 | 3/8 | 2.6 | |
| + | 1576 | " | 7/7 | 7/8 | 4/8 | 2.9 | |
| | 1577 | " | 7/8 | 8/8 | 6/8 | 3.2 | |
| + | 1583 | " | 5/7 | 7/8 | 2/8 | 2.6 | |
| | 1589 | 10-16-50 | 6/8 | 8/8 | 7/8 | 3.3 | |
| | 1590 | " | 8/8 | 6/8 | 8/8 | 3.4 | |
| + | 1591 | " | 8/8 | 7/8 | 3/6 | 2.9 | |
| | 1585 | " | 8/8 | 7/8 | 5/8 | 3.1 | |
| | 1598 | 12-28-50 | 8/8 | 8/8 | 5/8 | 3.2 | |
| | 1601 | " | 8/8 | 7/8 | 6/8 | 3.2 | |
| | 1602 | " | 8/8 | 8/8 | 6/8 | 3.3 | |
| | 1609 | " | 8/8 | 8/8 | 6/8 | 3.3 | |
| + | 1603 | 12-29-50 | — | 8/8 | 4/8 | 3.0 | |
| | 1610 | " | 7/8 | 6/8 | 7/8 | 3.2 | |
| | 1612 | " | 7/8 | 6/7 | 5/8 | 3.0 | |
| + | 1619 | " | 8/8 | 8/8 | 4/8 | 3.1 | |
| + | 1626 | " | 6/8 | 4/6 | 3/7 | 2.6 | — repeat 3.3 |
| | 1599 | 1-10-51 | 8/8 | 8/8 | 7/8 | 3.4 | |
| + | 1600X | " | 5/8 | 2/8 | 1/8 | 1.9 | |
| + | 1606 | " | 6/8 | 5/8 | 2/8 | 2.4 | — repeat 2.8 |
| | 1607 | " | 7/7 | 8/8 | 8/8 | 3.5 | |
| | 1608 | " | 8/8 | 8/8 | 5/8 | 3.3 | |

| | CYNOMOLGUS SERUM TESTED | DATE OF TEST | LOG OF FINAL DILUTION OF VIRUS IN MIXTURE | | | LOG $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | | 1.6 | 2.3 | 3.0 | | |
| + | 1611 | 1-11-51 | 8/8 | 7/7 | 2/7 | 2.8 | |
| | 1613 | " | 8/8 | 8/8 | 6/8 | 3.3 | |
| | 1614 | " | 8/8 | 7/7 | 7/8 | 3.4 | |
| | 1615 | " | 8/8 | 8/8 | 5/8 | 3.2 | |
| | 1616X | " | 7/8 | 8/8 | 5/8 | 3.1 | |
| | 1628X | 1-16-51 | 7/8 | 7/8 | 5/8 | 3.0 | |
| | 1629 | " | 8/8 | 7/8 | 6/8 | 3.2 | |
| | 1630 | " | 7/8 | 4/8 | 5/8 | 2.7 | |
| | 1631 | " | 8/8 | 7/8 | 4/8 | 2.9 | |
| | 1632 | " | 7/8 | 7/8 | 4/8 | 2.9 | |
| | 1633 | 1-18-51 | 8/8 | 6/8 | 4/8 | 2.8 | |
| | 1634 X | " | 8/8 | 7/8 | 7/8 | 3.4 | |
| | 1635 | " | 8/8 | 8/8 | 6/8 | 3.3 | |
| | 1636 | " | 8/8 | 8/8 | 7/8 | 3.4 | |
| | 1637 | " | 8/8 | 6/8 | 5/8 | 3.0 | |
| | 1617 X | 1-18-51 | 7/8 | 7/8 | 8/8 | 3.4 | |
| | 1618 | " | 8/8 | 8/8 | 7/8 | 3.4 | |
| | 1622 | " | 8/8 | 6/8 | 7/8 | 3.3 | |
| | 1623 | " | 7/8 | 7/8 | 6/8 | 3.2 | |
| | 1624 X | " | 8/8 | 8/8 | 6/8 | 3.3 | |
| | 1625 | " | 8/8 | 8/8 | 5/8 | 3.2 | |
| | 1627 | " | 8/8 | 8/8 | 7/8 | 3.4 | |

55 Cyn.

# Neutralizing Antibodies for Lansing Virus in Cynomolgus Monkeys Fed Y-SK or Wisconsin Polio in test of 7-24-50

Summary of tests of 8/29/50 + 8/30/50

| Serum tested | Date of test | Log of final dilution of virus in mixture | | | | Log $LD_{50}$ | Neutraliz. index |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| Virus Control - Saline | 8-29-50 | 8/8 | 8/8 | 6/8 | 2/8 | 3.5 | . . . . . |
| | 8-30-50 | 8/8 | 7/8 | 5/8 | 4/8 | 3.5 | . . . . . |
| | Cumul. | 16/16 | 15/16 | 11/16 | 6/16 | 3.5 | . . . . . |
| Normal rhesus - scurvy | 8-29-50 | 7/8 | 6/8 | 5/8 | . . . | 2.9 | 4 |
| Y-SK - 1537 - Par 23, K 28 | 8-29-50 | 7/8 | 6/8 | 1/8 | . . . . | 2.5 | ? 10 |
| " - 1545 - Par 10, K 28 | 8-30-50 | 0/8 | 0/8 | 0/8 | . . . . . | 1.2 | + 200 |
| " - 1538 - No signs, No lesions | 8-29-50 | 2/7 | 3/8 | 1/8 | | 1.7 | + 63 |
| " - 1540 " " | " | 1/8 | 1/7 | 0/8 | | 1.3 | + 160 |
| " - 1542 " " | " | 8/8 | 5/8 | 5/8 | | 2.9 | - 4 |
| " - 1543 " " | 8-30-50 | 8/8 | 7/8 | 6/8 | | 3.2 | - 2 |
| " - 1544 " " | " | 4/8 | 3/8 | 2/8 | | 2.0 | + 32 |
| " - 1546 " " | " | 8/8 | 7/8 | 8/8 | | 3.4 | - 0 |
| NL Wis - 1547 " " | 8-29-50 | 8/8 | 8/8 | 6/8 | | 3.2 | 2 |
| NL " - 1549 " " | " | 7/8 | 8/8 | 4/8 | | 3.0 | 3 |
| NL " - 1551 " " | 8-30-50 | 8/8 | 7/7 | 5/8 | | 3.2 | 2 |
| NL " - 1554 " " | " | 6/8 | 3/8 | 0/8 | | 2.0 | 32 |
| NL " - 1556 " " | " | 6/7 | 8/8 | 7/8 | | 3.3 | 2 |

STANDARD B&P "NOTEAR"
STANDARD B&P "NOTEAR"

# MONKEY SERA vs LANSING

AUG 29 1950

Purpose – To determine Lansing neutralizing capacity of sera of monkeys which were fed Y-SK & Wisconsin '45 Polio virus.

Sera – Sera obtained from monkeys days after the first of 3-2X daily feedings of Y-SK or Wisconsin polio virus

Virus – Lansing pool II of 6/6/50

Method – Virus & sera mixed making final virus dilution against each sera of 1/40, 1/200, $10^{-3}$ mixtures incubated at room temp. for 1 hour & placed in an ice bath during the incubation.

Mice – 18-20 gram mayfield albino (female).

| CODE | MONKEY SERA | FINAL VIRUS DILUTION 1/40 | 1/200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | Y-SK 1537 (PAR) | | | | — |
| B | Y-SK 1538 | | | | — |
| C | Y-SK 1540 | | | | — |
| D | Y-SK 1542 | | | | — |
| E | WISCONSIN 1547 | | | | — |
| F | WISCONSIN 1549 | | | | — |
| G | NORMAL SCURVY | | | | — |
| H | SALINE CCONTROL | | | | |

MONKEY SERA VS LANSING

AUG 29 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 1:40 | 1 | INOC (IN) | INOC INS | INOC IN | M | EE CNS | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 |
| | | 2 | - | - | - | eh | | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | ? | EE | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | H | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | CNS | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y-SK 1537 (PARI) + LANSING | | 6 | - | - | - | - | - | - | - | D | - | - | - | - | ? | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | CNS | D | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | P | P | P | D | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | 1:200 | 1 | - | - | - | eh | eh | E P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 |
| | | 2 | - | - | - | - | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | eh | eh | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | ? | ? | E | E | P | E | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | ? | - | P | P | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? | P | P | P | D | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | $10^{-3}$ | 1 | - | - | ? | ? | - | - | - | - | EE | P | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | 1/8 |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? | - | - | - | - | - | - | - | - | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| B | 1:40 | 1 | - | ? | ? | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2/7 |
| | | 2 | - | - | - | - | - | ? | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | E D | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? | TY | TY | TY | D | TYPHOID | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Y-SK 1538 + LANSING | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

MONKEY SERA VS LANSING

AUG 29 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B (CONT) Y-SK 1538 + LANSING | 1:200 | 1 | - | ? | ? CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | ? | FH | ZH | E | EE CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | ? | ? | - | - | - | - | - | P E | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? TY | ? TY | - | - | - | - | - | ? | - | - | - | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | $10^{-3}$ | 1 | - | - | CNS (1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | ? | ? | - | - | - | ? | ? CNS | ? | ? | - | - | - | - | - | - | - | - | - | - | - | - | ? TY | TY | TY | - | - | - | - | - | - | - | - | - | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| C Y-SK 1540 + LANSING | 1:40 | 1 | - | ? | ? | - | ? | ?E | - | - | ? | - | EE | EE CNS | PP | D | | | | | | | | | | | | | | | | | | | | | | 8/8 |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | 1:200 | 1 | - | - | ? | - | - | - | TY | TY | TY | - | - | - | - | ? TY | TY | - | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | TY | D | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? E | ? E | E | - | TY | TY | TY | TY | - | TY | ? | ? | ? | W E? | TP | P | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? (1) | E | E | ? | - | - | - | - | - | - | - | - | - | - | - | 1/7 |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
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AUG 29 1950

MONKEY SERA VS LANSING

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
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| | | 8 | - | - | - | - | - | - | - | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
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MONKEY SERA vs LANSING

AUG 29 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
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STANDARD B & P "NOTEAR"

AUG 29 1950

# MONKEY SERA VS LANSING

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
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MONKEY SERA + LANSING

AUG 29 1950

| SPECIMEN | VIRUS | No | 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 | MORTALITY |
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| NORMAL SCURVY + LANSING | $10^{-3}$ | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P EE | P P | PP P | D | | | | | | | | | | | | | | | | | | |
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AUG 29 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY | LD50 |
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# MONKEY SERA VS LANSING

AUG 30 1950

PURPOSE - To determine Lansing neutralizing Capacity of sera from monkeys which were fed Y-SK + Wisconsin '45 Polio virus.

SERA - Sera obtained from monkeys 7 days after the first of 3 twice daily feedings of Y-SK + Wisconsin Polio virus.

Virus - Lansing Pool V of 6/6/50

METHODS - Equal Parts of virus & sera mixed making final virus dilution of 1/40, 1/200, $10^{-3}$ against each serum to be tested. Mixtures incubated at room temperature for 1 hr & Placed in an ice bath during incubation.

MICE - 18-20 gm swiffield albino (female)

| CODE | MONKEY SERA | FINAL VIRUS DILUTION 1/40 | 1/200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | Y-SK 15 | | | | |
| B | Y-SK 15 | | | | |
| C | | | | | |
| D | | | | | |
| E | | | | | |
| F | | | | | |
| G | | | | | |

AUG 30 1950

MONKEY SERA VS LANSING

| SPECIMEN | VIRUS | No | 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 | MORTALITY |
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| | | 3 | - | - | E | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 7 | - | - | - | - | - | - | - | - | - | P | PR | D | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 1:200 | 1 | INOC INJ | INOC INJ | " | D | INOCULATION INJURY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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AUG 30 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
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AUG 30 1950

# MONKEY SERA VS. LANSING

| SPECIMEN | VIRUS | No. | 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 | MORTALITY |
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| SPECIMEN | VIRUS | No. | 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 | MORTALITY |
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| | | 5 | - | - | - | - | ? | - | - | ? | ? | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | ? P CNS | EE | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | EE | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 1 | - | - | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | ? | ? | - | - | - | - | PP PP D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | PP D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 4 | - | - | - | - | - | - | - | - | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | E | EE | PP | PR | D | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | EE | P EE | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | E | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | E | W E | EE CNS | PP EE CNS | D | | | | | | | | | | | | | | | | | | |

AUG 30 1950

MONKEY SERA VS LANSING

| SPECIMEN | VIRUS | MD | 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 | MORTALITY |
|---|---|---|---|---|
| E<br>WISCONSIN 1551<br>+<br>LANSING | 1:40 | 1 | - ? D | |
| | | 2 | - - PPP D | |
| | | 3 | - - ? ? ? P D | |
| | | 4 | - - - - - E FR D | |
| | | 5 | - - - - - ? - PP D | |
| | | 6 | - - - - - - - - PP D | |
| | | 7 | - - - - - - - - - P D | |
| | | 8 | - - - - - - - - - ? CNS PP D | |
| | 1:200 | 1 | - - - E EFh EFh PP PP D | |
| | | 2 | - - - CNS ? D | |
| | | 3 | - - - - ? ? - - ? ? PP P D | |
| | | 4 | - - - - - - - - - - E PP D | |
| | | 5 | - - - - - - - - - ? PP D | |
| | | 6 | - - - - - - - - - - P PP PP PR D | |
| | | 7 | - - - - - - - - - - ? PP PP D | |
| | | 8 | - - - - - - - - - - ? E E ? - - - - - - - - TY TY TY D - TYPHOID | |
| | $10^{-3}$ | 1 | - - - - - - - - - - E D | |
| | | 2 | - - - - - - - - - - - EE ? EE PP D | |
| | | 3 | - - - - - - - - - - - - - - - - E PP PP PP D | |
| | | 4 | - - - - - - - - - - - - - - - - - - P FR D | |
| | | 5 | - - - - - - - - - - - - - - - - - - ? ? hy PP D | |
| | | 6 | - - - - - - - - - - - - - - - - - - - - - ? - - - - - - | |
| | | 7 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - | |
| | | 8 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - | |
| F<br>WISCONSIN 1554<br>+<br>LANSING | 1:40 | 1 | - - - - Fh PP D | |
| | | 2 | - - - - ? CNS CNS PP D | |
| | | 3 | - - - - - - CNS (CNS) D | |
| | | 4 | - - - - - - ? CNS PP D | |
| | | 5 | - - - - - - - - E PP D | |
| | | 6 | - - - - - - - - EE EE EE EE EE ? - - - - - E ? ? - - ? D | |
| | | 7 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - | |
| | | 8 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - | |

MONKEY SERA US LANSING

AUG 30 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F (CONT) WISCONSIN 1554 + LANSING | 1:200 | 1 | - | ? | - | E? | E | E | E | ? | ? | E | ? | - | WE | E | PD | PP | D | | | | | | | | | | | | | | PP | D | | | | |
| | | 2 | - | - | - | - | - | - | - | - | ? | - | - | - | - | - | WEE | PP | D | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | PP | D | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | $10^{-3}$ | 1 | - | - | ? | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| G WISCONSIN 1556 + LANSING | 1:40 | 1 | - | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/7 |
| | | 2 | - | - | TY | TY | TY | TY | D | TYPHOID | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | ? | P | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | ? | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | ? | E | PEE | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | E | EE | EE | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | ? | - | ? | - | - | - | - | - | ? | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | 1:200 | 1 | - | - | - | - | ? | D | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 |
| | | 2 | - | - | - | - | - | ? | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | EE | CNS | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | ? | ? | CNS | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | ? | PP | PP | D | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | D | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | P | D | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | PP | PP | PR | PR | D | | | | | | | | |

AUG 30 1950

| SPECIMEN | VIRUS | MO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G (CONT) | | 1 | - | - | ←b | P | P | P | P | P | P? | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | - | - | - | - | - | ? | | EÉÉ CNS D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | ? | | ? | ←h | PP | PP | PP | P D | | | | | | | | | | | | | | | | | | | |
| WISCONSIN 1556 + LANSING | $10^{-3}$ | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | D | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? D | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | D | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS ? | - | - | - | ? | - | - | - | D? | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? | - | - | | | |
| H CONTROL | 1:40 | 1 | - | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | ? | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | ? CNS | PD | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | P EE | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | ? | PP | PR | PR | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | E | WE | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | PPP D | | | | | | | | | | | | | | | | | |
| SALINE + LANSING | 1:260 | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | PP | PR | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | PP D | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | $10^{-3}$ | 1 | - | ? | ? CNS | ? CNS | ? | P | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | ? | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | ? | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | P | PP | PP D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | ? | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ? | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

STANDARD B & P "NOTEAR"

STANDARD B & P "NOTEAR"

AUG 30 1950

MONAFY SERA VS LANSING

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H (CONT) | | 1 | - | - | - | - | ? | - | - | P | D | R | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | E | E | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | |
| CONTROL | $10^{-4}$ | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | PP | D | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| SALING | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| + | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| LANSING | | 8 | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

# SUMMARY OF TEST OF 10/10/50

TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH.

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ |
|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | |
| CYNOMOLGUS # 1558 | NORMAL | 8/8 | 8/8 | 7/8 | — | 3.4 |
| | POST Y-SK | 2/8 | 1/7 | 1/7 | — | 1.5 |
| CYNOMOLGUS # 1561 | NORMAL | 7/7 | 8/8 | 7/7 | — | 3.5 |
| | POST Y-SK | 1/8 | 2/8 | 0/8 | — | 1.4 |
| CYNOMOLGUS # 1562 | NORMAL | 8/8 | 8/8 | 6/8 | — | 3.3 |
| | POST Y-SK | 1/8 | 0/6 | 1/8 | — | 1.3 |
| CYNOMOLGUS # 1564 | NORMAL | 8/8 | 3/6 | 6/8 | — | 3.1 |
| | POST Y-SK | 3/8 | 3/7 | 4/8 | — | 2.1 |
| CYNOMOLGUS # 1566 | NORMAL | 8/8 | 8/8 | 7/8 | — | 3.4 |
| | POST Y-SK | 4/8 | 1/6 | 0/8 | | 1.7 |
| CONTROLS | | — | 7/7 | 8/8 | 0/8 | $10^{+3.5}$ |

OCT 10 1950

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK VIRUS BY MOUTH.

**PURPOSE:** To determine whether or not these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk (which neutralizes polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus. There were three groups of animals (1) those fed virus only (2) those fed human milk followed by virus, then milk again (3) those fed autoclaved Commercial Cow's milk, followed by virus, then milk again

**PROCEDURE:** 0.2 ml of serum was added to 0.2 ml of the following dilutions of virus (Lansing) in saline: 1/20, 1/100, 1/500, giving final dilutions of virus = 1/40, 1/200 and 1/1000. Virus controls consisted of 1/200, $10^{-3}$ and $10^{-4}$ dilution of Lansing in saline. The mixtures were shaken, incubated at room temperature for 1 hour. Inoculation lasted 90 minutes

**VIRUS:** Lansing virus: Pool V of 6/6/50 — 10% suspension in saline. Centrifuged at 2000 rpm for 10 minutes

**MICE:** 18-20 gram ♀ Matfield. 8 mice per dilution

**SERA USED:**

| GROUP | CYNOMOLGUS NO. | Remarks |
|---|---|---|
| VIRUS ONLY (Y-SK) | 1558 | Killed 28 days after 1st dose of virus |
| | 1561 | Killed 28 days after 1st dose of virus |
| | 1562 | Paralyzed 10 days after 1st dose. Killed 28 days. |
| | 1564 | Died 19 days. |
| Human milk followed by Virus (Y-SK) | 1566 | Killed 28 days after first dose of virus |

In addition to the post Y-SK sera, normal sera from each animal was tested simultaneously.

NOTEAR" STANDARD B & P "NOTEAR" STA
OCT 10 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| A<br>SERUM FROM CYNOMOLGUS #1558. PRE-VIRUS<br>+<br>LANSING | 1:40 | 1 | – P D | 8/8 |
| | | 2 | – – – D | |
| | | 3 | – – – – – – ? – – – – PP D | |
| | | 4 | – – – – – – – – – – – – CNS P E T CNS PP R D | |
| | | 5 | – – – – – – – – – – – –

SPECIMEN (CONTINUED)

**B**

SERUM FROM CYNOMOLGUS #1558 (VIRUS ONLY)

POST-VIRUS + LANSING

| VIRUS | NO | 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 | 29 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1:200 | 1 | – | – | · | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/7 |
| | 2 | – | – | · | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | MISSING 10/29 | | | | | | | | | | | | | | | |
| | 3 | – | – | · | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 4 | – | – | · | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 5 | – | – | · | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 6 | – | – | · | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 7 | – | – | · | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 8 | – | – | · | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| $10^{-3}$ | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/7 |
| | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? TY | ? TY | ? TY | ? | ? | ? | – | – | – | – | – | – | – | – | – | |
| | 4 | – | – | / | – | – | – | – | – | – | – | – | – | – | ? | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 5 | – | – | · | – | – | – | – | – | – | – | – | – | – | ? | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |

**C**

SERUM FROM CYNOMOLGUS #1561 [redacted] NORMAL + LANSING

| VIRUS | NO | 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 | 29 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1:40 | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/7 |
| | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | – | PP | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | – | ? | ? | ? | – | – | – | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | – | – | – | – | – | – | – | – | – | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | – | – | – | – | – | – | – | – | – | – | – | – | W | W | P | D | | | | | | | | | | | | | | | | | | | | |
| | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | E | – | – | – | – | – | – | – | – | – | – | – | E | D | | | | | | | |
| | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | PP | E PP | EE PP | PR | D | | | | |
| 1:200 | 1 | – | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | – | ? | – | ? | – | – | – | P | W | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | – | – | – | – | – | – | – | – | W | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | – | – | – | – | – | – | – | – | P | PP EE | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | – | – | – | – | – | – | – | – | – | – | PP EE | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | – | – | – | – | – | – | – | – | – | – | – | – | ? | ? | P | P P EE P | D | | | | | | | | | | | | | | | | | | | | |
| | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W | P | W | P P EE | PR | D | | | | | | | | | | | | | | | | |
| | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W | P | D | | | | | | | | | | | | | | |

OCT 10 1950

| SPECIMEN (CONTINUED) | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | | 1 | – | – | MISSING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYNOMOLGUS # 1561 | $10^{-3}$ | 4 | – | – | – | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | 7/7 |
| NORMAL + LANSING | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P | P | D | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | P | E | E | D | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | E | D | | | | | | | | | | | | | | | | |
| D | | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | | D | | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| CYNOMOLGUS # 1561 | 1\|40 | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1/8 |
| (VIRUS ONLY) | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| POST-VIRUS + LANSING | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 1 | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P | P | D | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2/8 |
| | 1\|200 | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | – | – | – | – | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 0/8 |
| | $10^{-3}$ | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| E<br>SERUM FROM CYNOMOLGUS # 1562<br>NORMAL + LANSING | 1/40 | 1 | – P D | 8/8 |
| | | 2 | – P PP D | |
| | | 3 | – – PP PP D | |
| | | 4 | – – – – – ? CNS PP EP D | |
| | | 5 | – – – – – – – TY CNS PP D | |
| | | 6 | – – – – – – – – – – – W PE D | |
| | | 7 | – – – – – – – – – – – W PP P D | |
| | | 8 | – – – – – – – – – – – – – W D | |
| | 1/200 | 1 | – PP P | 8/8 |
| | | 2 | – – P D | |
| | | 3 | – – – P D | |
| | | 4 | – – – P D | |
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| | | 7 | – – – – – – – – E PP E D | |
| | | 8 | – – – – – – – – – – – E PPP EEE D | |
| | $10^{-3}$ | 1 | – – D | 6/8 |
| | | 2 | – – PP D | |
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| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| F<br>SERUM FROM CYNOMOLGUS # 1562 (VIRUS ONLY) POST-VIRUS + LANSING | 1/40 | 1 | – – – W – – – ? – – – – – – – – – D | 1/8 |
| | | 2 | – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 3 | – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
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| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – | |

STANDARD B & P "NOTEAR"

OCT 10 1950

| SPECIMEN (CONTINUED) | VIRUS | NO | 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 29 28 29 30 31 32 33 34 35 | MORTALITY |
|---|---|---|---|---|
| F<br>SERUM FROM CYNOMOLGUS # 1562 (VIRUS ONLY) | 1/200 | 1 | missing 11/4/50 | 0/6 |
| | | 2 | missing 11/4/50 | |
| | | 3 | H H H H H | |
| | | 4 | | |
| | | 5 | | |
| | | 6 | | |
| | | 7 | | |
| | | 8 | | |
| POST-VIRUS + LANSING | $10^{-3}$ | 1 | | 1/8 |
| | | 2 | | |
| | | 3 | | |
| | | 4 | | |
| | | 5 | | |
| | | 6 | | |
| | | 7 | | |
| | | 8 | | |
| G<br>SERUM FROM CYNOMOLGUS # 1564<br>NORMAL + LANSING | 1/40 | 1 | | 8/8 |
| | | 2 | | |
| | | 3 | | |
| | | 4 | | |
| | | 5 | | |
| | | 6 | | |
| | | 7 | | |
| | | 8 | | |
| | 1/200 | 1 | | 3/6 |
| | | 2 | | |
| | | 3 | | |
| | | 4 | | |
| | | 5 | | |
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| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| (CONTINUED) G SERUM FROM CYNOMOLGUS # 1564 NORMAL + LANSING | $10^{-3}$ | 1 | — — P D | 6/8 |
| | | 2 | — P PP PP P D | |
| | | 3 | — P PP P D | |
| | | 4 | — — — P PP D | |
| | | 5 | — — — ? ? — — — — — cus ? PP D | |
| | | 6 | — — — — — — — — — — E ?E — — — — — — — — — — — — — P D | |
| | | 7 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| H SERUM FROM CYNOMOLGUS # 1564 (VIRUS ONLY) | 1/40 | 1 | — — — — P P PR PR D | 3/8 |
| | | 2 | — — — — — — PP PR D | |
| | | 3 | — — — — — — — — D | |
| | | 4 | — — — — — — — — — — — ? — — E ?E — — — — — — — — — — — | |
| | | 5 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 6 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 7 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| POST-VIRUS + LANSING | 1/200 | 1 | (D) | 3/7 |
| | | 2 | — — — — — — — — — — — — — P PP EE D | |
| | | 3 | — — — — — — — — — — — — — — W WW P P D | |
| | | 4 | — — — — — — — — — — — — — — W ? — — ?D | |
| | | 5 | — — — — — — — — — — — — — — — — — — ? — — ? — — — — — | |
| | | 6 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
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| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | $10^{-3}$ | 1 | — D | 4/8 |
| | | 2 | — — ? D | |
| | | 3 | — — — — D | |
| | | 4 | — — — EE — ? EE ? ? EE ? ? EE — — E? EE EW EE ? EE — — ? TY TY TY TY TY TY TY ? — ? E D | |
| | | 5 | — — — — — — — — — — — — — — — ? ? ? — — ? — ? ? — — — — — — ? — | |
| | | 6 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 7 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — | |

OCT 10 1950

| SPECIMEN | VIRUS | MICE | 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 | MORTALITY |
|---|---|---|---|---|
| I<br>SERUM FROM CYNOMOLGUS # 1566<br>NORMAL + LANSING | 1/40 | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8 | | 8/8 |
| | 1/200 | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8 | | 8/8 |
| | $10^{-3}$ | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8 | | 7/8 |
| J<br>SERUM FROM CYNOMOLGUS # 1566 (HUMAN MILK FOLLOWED BY VIRUS)<br>POST-VIRUS + LANSING | 1/40 | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8 | | 4/8 |

| SPECIMEN (CONTINUED) | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J<br>SERUM FROM CYNOMOLGUS # 1566 (HUMAN MILK FOLLOWED BY VIRUS)<br>POST-VIRUS + LANSING | 1/200 | 1 | – | ? CNS | CNS | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/6 |
| | | 2 | – | – | – | – | – | ? | ? | TY H | TY H | TY H | TY H | TY H | D | TYPHOID | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | TY | ? TY | – | W | ? | ? | – | – | ? | H | H | H | H | D | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | ? | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
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| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
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| | $10^{-3}$ | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 0/8 |
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| K<br>CONTROL SALINE + LANSING | 1/200 | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/7 |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | H TY | H TY | D | – | [illegible] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | PP | ? | ? | – | ? | P EE | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | ? CNS | WP | PPP | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | TY | ? TY | – | – | – | – | ? TY | TY | ? TY | ? TY | TY | D | Typhoid | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | – | W | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 |
| | | 2 | – | – | – | W | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | E PP | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | EE CNS | PP EE | D | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | EE | P D | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | P CNS | P D | | | | | | | | | |

STANDARD B & P "NOTEAR"

STANDARD B & P "

OCT 10 1950

| SPECIMEN | VIRUS | NO | 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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| (CONTINUED) | | 1 | – | – | ? | – | – | – | – | – | – | – | – | – | – | – | ? | ? | EWM | | ? | ? | – | – | – | ? | – | – | ? | ? | – | – | – | – | | – | – |
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| CONTROL | | 3 | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | ? | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – |
| | | 4 | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – |
| LANSING | 10⁻⁴ | 5 | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – |
| + | | 6 | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – |
| SALINE | | 7 | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – |
| | | 8 | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – |

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# SUMMARY OF TEST OF 10/11/50

TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGI GIVEN Y-SK BY MOUTH.

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ |
|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | |
| CYNOMOLGUS #1568 | NORMAL | 7/8 | 8/8 | 6/8 | — | 3.2 |
| | POST Y-SK | 3/8 | 1/7 | 1/8 | — | 1.6 |
| CYNOMOLGUS #1569 | NORMAL | 6/8 | 7/8 | 6/7 | — | 3.2 |
| | POST Y-SK | 3/7 | 2/8 | 0/8 | | 1.7 |
| CYNOMOLGUS #1572 | NORMAL | 5/8 | 5/8 | 2/8 | — | 2.4 |
| | POST Y-SK | 1/8 | 1/7 | 0/8 | — | 1.3 |
| CYNOMOLGUS #1575 | NORMAL | 7/8 | 5/8 | 5/8 | — | 2.8 |
| | POST Y-SK | 8/8 | 7/8 | 3/8 | — | 2.8 |
| CYNOMOLGUS #1579 | NORMAL | 5/7 | 5/8 | 3/7 | — | 2.4 |
| | POST Y-SK | 4/8 | 1/8 | 0/8 | — | 1.7 |
| CONTROLS | | — | 8/8 | 5/8 | 1/6 | 3.3 |

# Test for Development of Neutralizing Antibodies for Lansing Virus Among Different Groups of Cynomolgus Monkeys Given L-5K Virus by Mouth.

| Group | Cynomolgus No. | Remarks |
|---|---|---|
| Virus only | ✓1558 | Killed 28 days after 1st dose |
| | ~~1560~~ | ~~" 8 days " "~~ ~~(No Polio lesions)~~ |
| | ✓1561 | Killed 28 days after 1st dose |
| | ✓1562 | Paralyzed 10 days after 1st dose Killed 28 days |
| | ✓1564 | Died 19 days |
| Human Milk followed by Virus | ✓1566 | Killed 28 days after 1st dose of virus |
| | ✓1568 | |
| | ✓1569 | |
| | ✓1572 | |
| | ✓1575 | |
| | ✓1579 | Killed 29 days |
| | ✓1581 | |
| | ✓1573 | Par. 10 days - Killed 18 days when terminal. |
| | ✓1576 | Par " " - " 12 days " " |
| | ✓1577 | Par " " - " 16 days " " |
| No blood taken | 1582 | Par 11 " - Died 13 days |
| Autoclaved Cow's Milk followed by virus | ✓1583 | Killed 29 days after 1st dose of virus |
| | 1589 | |
| | 1590 | |
| | 1591 | |
| | 1585 | - Killed 10 days after 1st dose of virus when terminal due to intercurrent disease. No Polio lesions |

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH.

OCT 11 1950

**PURPOSE:** To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk (which neutralizes polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus. There were three groups of animals: (1) those fed Y-SK only (2) those fed human milk followed by virus, then milk again (3) those fed autoclaved Commercial Cow's milk, followed by virus, then milk again.

**PROCEDURE:** 0.2 of a ml. of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500, giving final dilutions of virus = 1/40, 1/200, 1/1000. Virus Controls Consisted of 1/200, $10^{-3}$, and $10^{-4}$ dilution in saline. The mixtures were shaken and incubated at room temperature for 1 hour. Inoculation lasted 100 minutes.

**VIRUS:** Lansing Virus: Pool IV of 6/6/50. 10% suspension in saline. Centrifuged 2000 rpm for 10 minutes

**MICE:** 18-20 gram ♀ Mayfield. 8 mice per dilution

**SERA USED:**

| GROUP | CYNOMOLGUS # | REMARKS |
|---|---|---|
| HUMAN MILK FOLLOWED BY VIRUS (Y-SK) | 1568 | Killed 28 days after first dose of virus. |
| | 1569 | |
| | 1572 | |
| | 1575 | |
| | 1579 | Killed 29 days after first dose of virus. |

In addition to the post Y-SK sera, normal sera from each animal was tested simultaneously.

OCT 11 1954

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| A<br>SERUM FROM CYNOMOLGUS # 1568<br>NORMAL<br>+<br>LANSING | 1/40 | 1 | – PP D | 7/8 |
| | | 2 | – – ? PP PP D | |
| | | 3 | – – – PP D | |
| | | 4 | – – – – – – ? ? PP D | |
| | | 5 | – – – – – – – – – – – – ? WWWW EE D | |
| | | 6 | – – – – – – – – – – – – ? ? WW EE CWS EE D | |
| | | 7 | – – – – – – – – – – – – – ? – EE D | |
| | | 8 | – – – – – – – – – – – – –

| SPECIMEN (CONTINUED) | VIRUS | NO | 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 29 28 29 30 31 32 33 34 35 | MORTALITY |
|---|---|---|---|---|
| B<br>SERUM FROM CYNOMOLGUS # 1568<br>(HUMAN MILK FOLLOWED BY VIRUS)<br>POST Y-SK + LANSING | 1/200 | 1 | — — — — — D | 1/7 |
| | | 2 | — — — — E — E E E — — — ? ? H H H H H H H D | |
| | | 3 | — — — — — — — — — — — — ? — ? — — — ? ? — ? ? — — — — — — — | |
| | | 4 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 5 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 6 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 7 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | $10^{-3}$ | 1 | — ? ? — — — — — — — — — — — — W P PP D | 1/8 |
| | | 2 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 3 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 4 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 5 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 6 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 7 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| C<br>SERUM FROM CYNOMOLGUS # 1569<br>NORMAL + LANSING | 1/40 | 1 | — D | 6/8 |
| | | 2 | — P PP D | |
| | | 3 | — — ? — PP D | |
| | | 4 | — — — — — CNS PP D | |
| | | 5 | — — — — — ? ? — — — — CNSE P PR D | |
| | | 6 | — — — — — — — — — — — — — — E D | |
| | | 7 | — — — — — — — — — — — — — — — — W ? — — — — — — — — — — — — | |
| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |
| | 1/200 | 1 | — PP D | 7/8 |
| | | 2 | — P P D | |
| | | 3 | — P PP D | |
| | | 4 | — ? PP D | |
| | | 5 | — — PP PP PPPP D | |
| | | 6 | — — ? — — — — — — — — P EE PR D | |
| | | 7 | — — — — — — — — — — — — P P PR D | |
| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — | |

OCT 1 1 1950

| SPECIMEN | VIRUS | DD | 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 | MORTALITY |
|---|---|---|---|---|
| C<br>SERUM FROM CYNOMOLGUS # 1569<br>NORMAL<br>+<br>LANSING | $10^{-3}$ | 1 | – – PP D | 6/7 |
| | | 2 | – – ? D | |
| | | 3 | – – – PP D | |
| | | 4 | – – – – P P D | |
| | | 5 | – – – – – CHS – – TY TY ? D | |
| | | 6 | – – – – – – – – – – – E E E E P P R R D | |
| | | 7 | – – – – – – – – – – – – ? ? WN ? TY TY D TYPHOID | |
| | | 8 | – – – – – – – – – – – –

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E<br>SERUM FROM CYNOMOLGUS # 1572<br>NORMAL + LANSING | 1/40 | 1 | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 |
| | | 2 | – | – | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | WW | WW | WW | WW | WW | ? | W | W | – | ? | CNS | P | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W | P E | D | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | ? | ? | ? CNS | CNS | ? CNS | ? | W | ? | WW | WP | | D | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | – | ? | – | – | – | | WW ? | WW ? | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | 1/200 | 1 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 |
| | | 2 | – | – | ? | – | – | – | – | – | – | – | – | – | – | PP | PP | PR | D | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | PE | EE | PR | D | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | D | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | $10^{-3}$ | 1 | – | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2/8 |
| | | 2 | – | – | – | WP P | PP D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | TY ? | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | WW | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| F<br>SERUM FROM CYNOMOLGUS # 1572 (HUMAN MILK FOLLOWED BY VIRUS) POST Y-SIT + LANSING | 1/40 | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | E | – | ? | ? | EE CNS | D | | | | | | | | | | | | | | | | | 1/8 |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |

STANDARD B & P "NOTEAR"

STANDARD B & P "NOTEAR"

OCT 11 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (CONTINUED) F | | 1 | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | – | – | ? | – | – | – | TY | D | TYPHOID | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | W | W | ? | WW | – | – | – | – | – | – | – | – | – | – | ? | – | – | – | – | – | – | – | |
| SERUM FROM CYNOMOLGUS # 1572 | 1/200 | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1/7 |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| (HUMAN MILK FOLLOWED BY VIRUS) | | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E? | – | – | – | – | ? | ? | ? | E? | – | ? | – | – | – | – | – | – | – | – | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| POST Y-SK + LANSING | $10^{-3}$ | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 0/8 |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| G | | 1 | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS # 1575 | 1/40 | 4 | – | – | – | – | – | – | – | – | P E | P E | P E | P E | D | | | | | | | | | | | | | | | | | | | | | | | 7/8 |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | P | | PD | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W | P | PR | D | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | P | PP | P E | P E | D | | | | | | | | | | | | | |
| NORMAL + LANSING | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 1 | – | – | ? | WW | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | – | – | P | P E | P E | P E | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | WW | D | | | | | | | | | | | | | | | | | |
| | 1/200 | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | – | – | – | – | – | ? | – | ? | ? | ? | – | – | P | | D | | | 5/8 |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W E | W E | W E | P E |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |

| SPECIMEN (CONTINUED) | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| G<br>SERUM FROM CYNOMOLGUS # 1575 NORMAL + LANSING | $10^{-3}$ | 1 | – – P D | 5/8 |
| | | 2 | – – – E D | |
| | | 3 | – – – PP D | |
| | | 4 | – – – – – – PR D | |
| | | 5 | – – – – – – – ? PPPPPR D | |
| | | 6 | – – – – – – – – ? ? – – – ? V WN ? – – – – – ? CNS CNS ? ? ? ? ? ? ? ? – | |
| | | 7 | – – – – – – – – – – – – – ? WN ? – – – – – – – – – – – – – – | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| H<br>SERUM FROM CYNOMOLGUS # 1575<br>(HUMAN MILK FOLLOWED BY VIRUS)<br>POST YSK + LANSING | 1/10 | 1 | – PP D | 8/8 |
| | | 2 | – P PP D | |
| | | 3 | – – ? ? ? PPPPPP D | |
| | | 4 | – – ? – – – PP PR D | |
| | | 5 | – – – – – – – – ? CNS PR D | |
| | | 6 | – – – – – – – – – – – – – PW P D | |
| | | 7 | – – – – – – – – – – – – – – ? PP D | |
| | | 8 | – – – – – – – – – – – – – – – – – – ? ? ? – – W P D | |
| | 1/200 | 1 | – – D | 7/8 |
| | | 2 | – – B | |
| | | 3 | – – 2 D | |
| | | 4 | – – – D | |
| | | 5 | – – – – – – TY? ? ? TY ? TY TY TY TY TY TY ? TY ? TY ? TY P D | |
| | | 6 | – – – – – – – – E PP E D | |
| | | 7 | – – – – – – – – – – – – – – ? – – – – – – – – – – – P P P P P | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | $10^{-3}$ | 1 | – – – D | 3/8 |
| | | 2 | – – – – – – PPP D | |
| | | 3 | – – – – – – – – – – – – – ? ? ? – – – – – ? TYP E PR D | |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |

OCT 11 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I<br>SERUM FROM CYNOMOLGUS # 1579<br>NORMAL + LANSING | 1/10 | 1 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/7 |
| | | 2 | – | – | – | – | H | H? | H | H | H | H | H | H | H | H | D | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | TY | – | – | – | – | ? | P | PP | D | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | TY | – | – | – | – | – | – | ? | ? | – | – | E | P<br>E | D | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | – | – | – | – | – | – | – | – | – | – | – | – | W | P | W | P | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W | P | W | P | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | |
| | 1/200 | 1 | – | – | ? | : | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 |
| | | 2 | – | – | – | – | – | – | – | – | – | – | ? | ? | – | – | – | E | D | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | WW<br>? | – | – | ? | TY<br>? | ? | TY<br>? | PP | D | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | ? | PP | D | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P<br>P | D | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | CMS | ? | ? | ? | ? | – | ? | ? | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | $10^{-3}$ | 1 | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/7 |
| | | 2 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | *MISSING – 10/15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | E | – | E | ? | ? | E | E | ? | – | – | P | D | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W<br>? | W<br>? | ? | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
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| J<br>SERUM FROM CYNOMOLGUS # 1579<br>(HUMAN MILK FOLLOWED BY VIRUS)<br>POST Y-SH + LANSING | 1/60 | 1 | — | — | ? | — | ? | ? | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | 4/8 |
| | | 2 | — | — | — | — | — | — | WPP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | — | — | — | — | ?PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | — | — | — | P | PPPP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | — | — | — | — | — | — | — | ? | ? | ? | — | E | E | E | WW EE E | ? E | — | — | — | ? CNS | ? | ? | ? CNS | E | ? | ? | E | E | E | | E | E | — | | |
| | | 6 | — | — | — | — | — | — | — | — | ?E | — | — | — | — | — | — | E WW E | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | 1/200 | 1 | — | — | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/8 |
| | | 2 | — | — | — | — | — | — | W | — | — | — | — | — | ? | ? | — | WW ? | — | — | — | — | — | — | ? | ? CNS | ? | ? | ? | — | — | — | — | — | — | — | | |
| | | 3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 5 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | $10^{-3}$ | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | 0/8 |
| | | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 5 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

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| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| K CONTROL SALINE + LANSING | $10^{-4}$ | 1 | – D | 8/8 |
| | | 2 | – P PP D | |
| | | 3 | – – – ? – – – – – – – CWS D | |
| | | 4 | – – – – – – – – – – – – P EEP D | |
| | | 5 | – – – – – – – – – – – – P EEP D | |
| | | 6 | – – – – – – – – – – – – – ER ? ? – P E D | |
| | | 7 | – – – – – – – – – – – – – – – – – P P D | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – ? P D | |
| | $10^{-5}$ | 1 | – – ? P P D | 5/8 |
| | | 2 | – – – ? ? – – – – – – – – ? ? P D | |
| | | 3 | – – – – – – – – – – – – – – – – – – WW P P EE EE D | |
| | | 4 | – – – – – – – – – – – – – – – – – – – – ? – ? P P P D | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – P E P EE D | |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | $10^{-4}$ | 1 | – – – – – – P P D | 1/6 |
| | | 2 | – – – – – – – – – – – – ? ? ? ? MISSING | |
| | | 3 | – – – – – – – – – – – – – – – – MISSING | |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | |

# SUMMARY OF TEST OF OCTOBER 13, 1950

TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGI GIVEN Y-SK BY MOUTH.

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ |
|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | |
| CYNOMOLGUS #1581 | NORMAL | 8/8 | 4/8 | 2/7 | — | 2.5 |
| | POST Y-SK | 8/8 | 5/7 | 4/8 | — | 2.8 |
| CYNOMOLGUS #1573 | NORMAL | 7/8 | 5/8 | 3/8 | — | 2.6 |
| | POST Y-SK | 2/8 | 1/8 | 0/7 | — | 1.3 |
| CYNOMOLGUS #1576 | NORMAL | 7/7 | 7/8 | 4/8 | — | 2.9 |
| | POST Y-SK | 1/8 | 1/7 | 0/8 | — | 1.3 |
| CYNOMOLGUS #1577 | NORMAL | 7/8 | 8/8 | 6/8 | — | 3.2 |
| | POST Y-SK | 1/8 | 0/8 | 0/8 | - | 1.3 |
| CYNOMOLGUS #1583 | NORMAL | 5/7 | 7/8 | 2/8 | — | 2.6 |
| | POST Y-SK | 2/8 | 0/8 | 0/8 | - | 1.4 |
| CONTROLS | | — | 7/8 | 7/8 | 3/8 | 3.6 |

TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH.

OCT 13 1950

PURPOSE: To determine if the monkeys which were fed Y-SK have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk would effectively neutralize Y-SK if the milk was fed before and after administration of the virus. There were three groups of animals: (1) those fed Y-SK only (2) those fed human milk followed by virus, then milk again (3) those fed autoclaved Commercial cow's milk, followed by virus, then milk again.

PROCEDURE: 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500, 1:1000. Virus Control Consisted of 1/200, $10^{-3}$ and $10^{-4}$ dilutions in saline. The mixtures were shaken and incubated at room temperature for 1 hour. Inoculation lasted 90 minutes.

VIRUS: Lansing Virus: Pool V of 6/6/50. 10% suspension in saline. Centrifuged 2000 RPM for 10 minutes.

MICE: 18-20 gram ♀ Mayfield. 8 mice per dilution

SERA USED:

| GROUP | CYNOMOLGUS | REMARKS |
|---|---|---|
| ~~TEST~~ | 1581 | Killed 29 days after first dose of virus |
| Human MILK FOLLOWED BY VIRUS | 1573 | Par. 19 days. Killed 18 days when terminal |
| | 1576 | Par. 10 days. Killed 12 days when terminal |
| | 1577 | Par. 10 days. Killed 16 days when terminal |
| AUTOCLAVED COWS MILK FOLLOWED BY VIRUS | 1583 | Killed 29 days after first dose of virus |

STANDARD B & P "NOTEAR" STANDARD B & P "NOTEAR" OCT 13 1950

| SPECIMEN | VIRUS | DD | 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 | MORTALITY |
|---|---|---|---|---|
| A<br>SERUM FROM CYNOMOLGUS #1581<br>NORMAL + LANSING | 1/40 | 1 | – CNS D | 8/8 |
| | | 2 | – – CNS PP D | |
| | | 3 | – – – CNS CNS D | |
| | | 4 | – – – P PP PP D | |
| | | 5 | – – – ? ? ? ? – PP D | |
| | | 6 | – – – – – – – – PP D | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – P D | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – T T P D | |
| | 1/200 | 1 | – ? D | 4/8 |
| | | 2 | – – ? PP D | |
| | | 3 | – – – – – – P PP D | |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – ? ? – P PW D | |
| | | 5 | – – – – – – – – – – – – – – – – – – –

| SPECIMEN | VIRUS | NO | 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 | MORTALITY | |
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| B<br>SERUM FROM CYNOMOLGUS #1581<br>HUMAN MILK FOLLOWED BY VIRUS<br>POST Y-SK + LANSING | 1/200 | 1 | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/7 | $10^{-2.8}$ |
| | | 2 | — | — | ? | — | — | — | — | ? | — | — | ? | E | TY? | ? | TY | TY | D | Typhoid | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | — | — | — | — | — | W | P | D | | | | | | | | | | | | | | |
| | | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | ? | PP | PR | D | | | | | | | | | | |
| | | 5 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | PPP | D | | | | | | | | | | |
| | | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | TY? | — | — | ? | — | | ? | P | D | | | | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | $10^{-3}$ | 1 | — | — | WW | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4/8 | |
| | | 2 | — | — | ? | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | — | — | — | — | — | ? EE | — | — | — | — | — | — | WW | D | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | — | P | P | D | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| C<br>SERUM FROM CYNOMOLGUS #1573<br>NORMAL + LANSING | 1/40 | 1 | — | PW | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | $10^{-2.6}$ |
| | | 2 | — | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | ? | ? | — | — | — | ? | EE CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | — | — | — | — | ? CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | — | — | — | — | — | — | — | — | ? | — | — | EE | WW EE | — | — | FW | EE | P EE | PR | D | | | | | | | | | | | | | | | |
| | | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | — | — | — | — | E | E ? | E ? | — | — | P | D | | | | | | | | | | | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | E | E | E | E | | D | | | | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | — | — | — | | |
| | 1/200 | 1 | — | W | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 | |
| | | 2 | — | — | — | — | — | ? | ? | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | — | — | — | — | — | — | — | — | — | — | W | ? | WW | — | E | E | E | E CNS | WE | D | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | — | — | — | — | — | PP ? | PP ? | P | D | | | | | | | | | | | | | |
| | | 5 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | CNS | CNS | CNS | CNS | PP | D | | | | | | | | | | | |
| | | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | ? | — | — | ? | — | — | — | | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

OCT 13 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C (CONT) SERUM FROM CYNOMOLGUS # 1573 NORMAL + LANSING | $10^{-3}$ | 1 | – | – | ? | ? | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | ? | ? | PP E | D | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | WW | PR | D | | | | | | | | | | | | | | | | | | | 3/8 |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | ? | ? | – | – | ? | ? | – | – | – | | – | – | – | – | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | | |
| D SERUM FROM CYNOMOLGUS # 1573 HUMAN MILK FOLLOWED BY VIRUS | 1/40 | 1 | – | – | – | – | – | – | – | – | – | – | EPE | D | | | | | | | | | | | | | | | | | | | | | | | 2/8 | $10^{-1.3}$ |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | W | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | HH | | D | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | ? | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| POST Y-ST + LANSING | 1/200 | 1 | – | – | ? | – | – | – | ? | – | – | – | ? | – | – | ? | W | D | | | | | | | | | | | | | | | | | | | 1/8 |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | $10^{-3}$ | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | E | – | 14 | ? TY | ? TY | ? | ? | ? | – | – | – | ? | – | – | – | – | | – | – | – | D | 0/7 | |
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| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | | |

| SPECIMEN | VIRUS | NO | 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 | MORTALITY | |
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| E<br>SERUM FROM CYNOMOLGUS # 1576<br>NORMAL + LANSING | 1/40 | 1 | — | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/7 | $10^{-2.9}$ |
| | | 2 | — | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | ? | — | — | — | — | — | EE CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | — | — | — | — | — | — | — | — | — | ? | WWP | W | ? | ? | ? | ? | P | D | | | | | | | | | | | | | | | | | | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | TY | D | TYPHOID | | | | | | | | | | | | | | | | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | ? | D | | | | | | | | | | | |
| | 1/200 | 1 | — | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 2 | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | — | — | — | — | WWPP E E | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | — | — | — | — | — | — | — | EE CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | — | — | — | — | — | — | — | — | ? | — | — | — | — | — | — | — | — | E | E | E PPP | PP | P | D | | | | | | | | | | | | | | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | $10^{-3}$ | 1 | — | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4/8 | |
| | | 2 | — | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | — | — | — | — | — | ? | — | — | — | — | — | EE | ? EE | E | ? | — | — | — | — | — | — | — | — | — | — | — | P | | D | | | | | |
| | | 5 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| F<br>SERUM FROM CYNOMOLGUS # 1576<br>HUMAN MILK FOLLOWED BY VIRUS POST Y-SF + LANSING | 1/40 | 1 | — | — | ? | — | — | — | — | — | — | — | — | — | ? | — | ? | — | — | — | — | — | ? | P | D | | | | | | | | | | | | | | 1/8 | $10^{-1.3}$ |
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| SPECIMEN | VIRUS | NO | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|
| K<br>CONTROL<br>SALINE<br>+<br>LANSING | 1/200 | 1 | – P D | 7/8 | $10^{-3.6}$ |
| | | 2 | – – – – – – – – P D | | |
| | | 3 | – – – – – – – – P D | | |
| | | 4 | – – – – – – – – ? W W W W D | | |
| | | 5 | – – – – – – – – – E E W E W E P P D | | |
| | | 6 | – – – – – – – – – – – – – – – – P P D | | |
| | | 7 | – – – – – – – – – – – – – – – – P P D | | |
| | | 8 | – – – – – – – – – – – – – – – –

# SUMMARY OF TEST OF OCTOBER 16, 1950

TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGI GIVEN Y-SK BY MOUTH.

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ |
|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | |
| CYNOMOLGUS # 1589 | NORMAL | 6/8 | 8/8 | 7/8 | — | 3.3 |
| | POST Y-SK | 1/7 | 1/8 | 0/8 | — | 1.3 |
| CYNOMOLGUS # 1590 | NORMAL | 8/8 | 6/8 | 8/8 | — | 3.4 |
| | POST Y-SK | 2/8 | 1/8 | 0/8 | — | 1.3 |
| CYNOMOLGUS # 1591 | NORMAL | 8/8 | 7/8 | 3/6 | — | 2.9 |
| | POST Y-SK | 1/8 | 1/8 | 1/7 | — | 1.4 |
| CYNOMOLGUS # 1585 | NORMAL | 8/8 | 7/8 | 5/8 | — | 3.1 |
| | POST Y-SK | 8/8 | 5/8 | 2/8 | — | 2.6 |
| CONTROLS | | — | 20/20 | 15/20 | 2/20 | $10^{-3.4}$ |

Nov. 20, 1950 fin
ans started Dec. 5.

# TEST FOR THE PRESENCE OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK VIRUS BY MOUTH

OCT 16 1950

**PURPOSE:** To determine if those monkeys which were fed Y-SK have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk would effectively neutralize Y-SK if the milk was fed before and after administration of the virus. There were three groups of animals: (1) those fed Y-SK only (2) those fed human milk followed by virus - then milk again (3) those fed autoclaved commercial cow's milk, followed by virus, then milk again.

**PROCEDURE:** 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1/20, 1/100, 1/500, giving final dilutions of virus = 1/40, 1/200, and 1/1000. Virus Control Consisted of 1/200, $10^{-3}$, and $10^{-4}$ dilutions in saline. The mixtures were shaken and incubated at room temperature for 1 hour. Inoculation lasted 90 minutes.

**VIRUS:** Lansing Virus: Pool V of 6/6/50. 10% suspension in saline. Centrifuged 2000 rpm for 10 minutes.

**MICE:** 18-20 gram Swiss Rockfield. 8 mice per dilution*

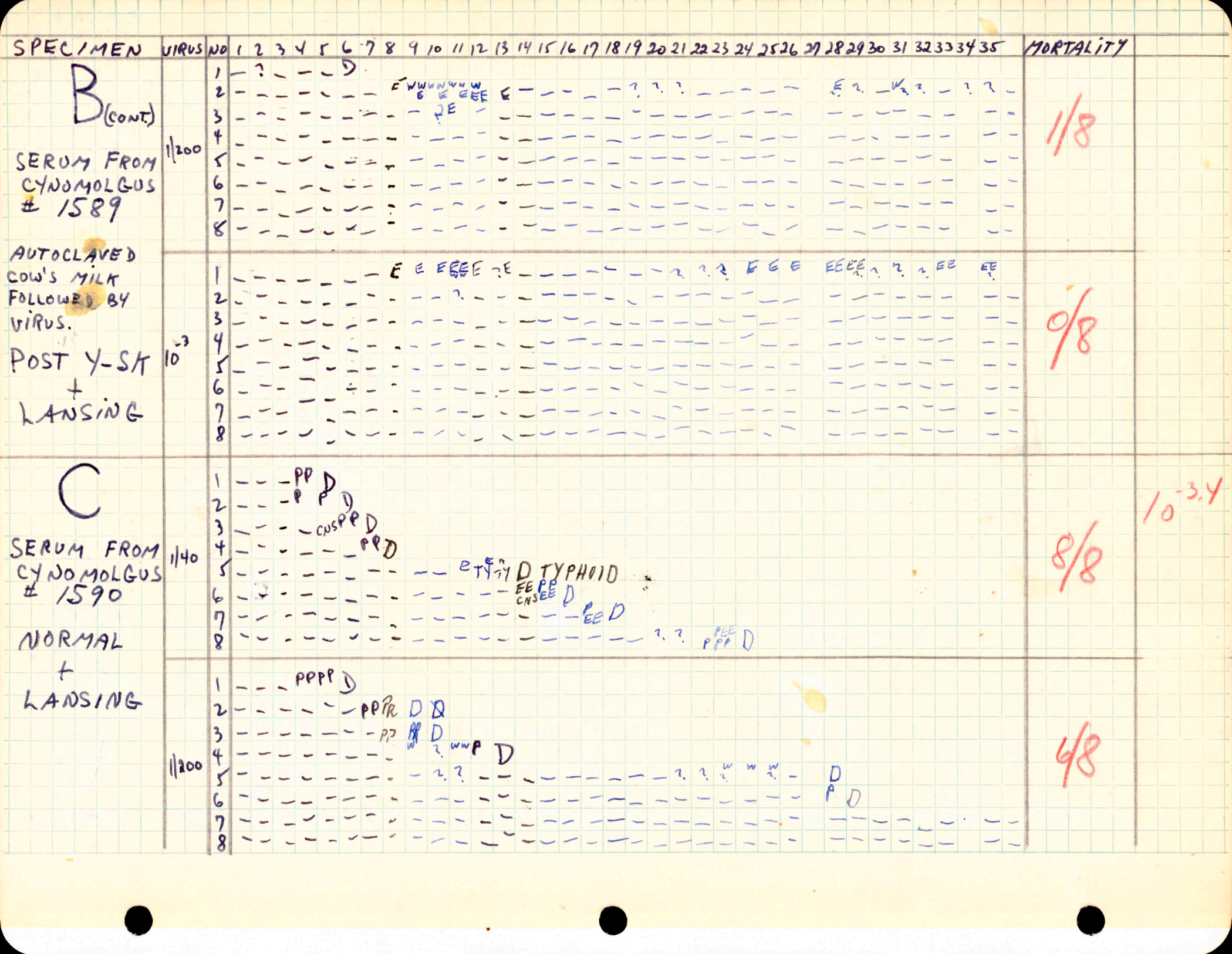
**SERA USED:**

| GROUP | CYNOMOLGUS | REMARKS |
|---|---|---|
| Autoclaved cow's milk followed by virus | 1589 | Killed 29 days after first dose of virus. |
| | 1590 | |
| | 1591 | |
| | 1585 | Killed 10 days after first dose of virus when terminal due to intercurrent disease. No polio lesions |

* For the Controls 20 mice were used in each dilution in order to determine with greater accuracy the $LD_{50}$ titer of the virus at this time.

OCT 16 1950

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | |
|---|---|---|---|---|---|
| A<br>SERUM FROM CYNOMOLGUS # 1589<br>NORMAL + LANSING | 1/40 | 1 | – PP WW D | 6/8 | $10^{-3.3}$ |
| | | 2 | – – – D | | |
| | | 3 | – – ? ? E E ? ? ? E E E E – W D | | |
| | | 4 | – – – – – – – – – ? – – CR P P E E E E D | | |
| | | 5 | – – – – – – – – – – – – – – P P P P P D | | |
| | | 6 | – – – – – – – – – – – – – – – ? ? – – – ? ? ? W WW P E E D | | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – ? – – | | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | 1/200 | 1 | – P | 8/8 | |
| | | 2 | – P P P D | | |
| | | 3 | – P P P D | | |
| | | 4 | – – ? D | | |
| | | 5 | – – – W P P P D | | |
| | | 6 | – – – – – – – W P E D | | |
| | | 7 | – – – – – – – – – – – – – – – – – – P D | | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – D | | |
| | $10^{-3}$ | 1 | – ? D | 7/8 | |
| | | 2 | – – D | | |
| | | 3 | – – D | | |
| | | 4 | – – – – – – – – ? ? E E CWS EE CWS D | | |
| | | 5 | – – – – – – – – – ? – – ? P E E D | | |
| | | 6 | – – – – – – – – – – – – – – – – – – ? ? – – W E H P E H E D | | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – PP EE D | | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| B<br>SERUM FROM CYNOMOLGUS # 1589 AUTOCLAVED COWS MILK FOLLOWED BY VIRUS POST Y-SK + LANSING | 1/40 | 1 | – – – – – – – W W W – – TY TY TY TY D TYPHOID | 1/7 | $10^{-1.3}$ |
| | | 2 | – – – – – – – – – – – – – – – – – – – – – – – – – – P W P W E E D | | |
| | | 3 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |


SPECIMEN
VIRUS
NO
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
MORTALITY
B (CONT.)
SERUM FROM CYNOMOLGUS # 1589
1/200
1/8
AUTOCLAVED COW'S MILK FOLLOWED BY VIRUS.
POST Y-S/T + LANSING
$10^{-3}$
0/8
C
SERUM FROM CYNOMOLGUS # 1590
NORMAL + LANSING
1/40
TYPHOID
8/8
$10^{-3.4}$
1/200
6/8

OCT 1 6 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| C (CONT.) SERUM FROM CYNOMOLGUS #1590 NORMAL + LANSING | $10^{-3}$ | 1 | P P PP PP D | 8/8 |
| | | 2 | th th th th e P P P P P P P W W W | |
| | | 3 | E E EVS D | |
| | | 4 | R. PP ORP W D | |
| | | 5 | ? D | |
| | | 6 | P P P D | |
| | | 7 | P P E PR D | |
| | | 8 | ? ? ? ? ? W W W P EE P EE P EE D | |
| D SERUM FROM CYNOMOLGUS #1590 AUTOCLAVED COW'S MILK FOLLOWED BY VIRUS POST X-SH + LANSING | 1/40 | 1 | D | 2/8 |
| | | 2 | D | |
| | | 3 | ? ? EEE ? ? | |
| | | 4 | | |
| | | 5 | | |
| | | 6 | | |
| | | 7 | | |
| | | 8 | | |
| | 1/200 | 1 | E E E ? ? E E ? ? E ? E P E P D | 1/8 |
| | | 2 | ? ? ? ? TY ? | |
| | | 3 | | |
| | | 4 | | |
| | | 5 | | |
| | | 6 | | |
| | | 7 | | |
| | | 8 | | |
| | $10^{-3}$ | 1 | W ? ? ? ? ? | 0/8 |
| | | 2 | E | |
| | | 3 | | |
| | | 4 | | |
| | | 5 | | |
| | | 6 | | |
| | | 7 | | |
| | | 8 | | |

| SPECIMEN | VIRUS | NO | 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 | MORTALITY | |
|---|---|---|---|---|---|
| E<br>SERUM FROM CYNOMOLGUS #1591<br>NORMAL + LANSING | 1/40 | 1 | – D | 8/8 | $10^{-2.9}$ |
| | | 2 | – D | | |
| | | 3 | – PP D | | |
| | | 4 | – – – – – – – – – – – – PP D | | |
| | | 5 | – – – – – – – – – – – – – W EE D | | |
| | | 6 | – – – – – – – – – – – – – ? ? – P D | | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – ? W P EE P PP P PP P PP P PP P | | |
| | | 8 | – – – – – – – – – – – – – – – – – – –

OCT 16 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| F (CONT.) SERUM FROM CYNOMOLGUS # 1591 AUTOCLAVED COW'S MILK FOLLOWED BY VIRUS. | 1/200 | 1 | – – – – ? ? PP D | 1/8 |
| | | 2 | – – – – – – – – – E E E ? ! ? – E E WW ? ? – – – – – – – – |
| | | 3 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| POST Y-SH + LANSING | $10^{-3}$ | 1 | – D | 1/7 |
| | | 2 | – – – – – – – – – TY TY D TYPHOID |
| | | 3 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – |
| G SERUM FROM CYNOMOLGUS # 1585 NORMAL + LANSING | 1/40 | 1 | – EE D | $10^{-3.1}$ 8/8 |
| | | 2 | – EE PP D |
| | | 3 | – – EE D |
| | | 4 | – – – EE CNS ? EE CNS EE CNS EE ? EE P EE D |
| | | 5 | – – – – – – – – – – E CNS D |
| | | 6 | – – – – – – – – – – – CNS P EE D |
| | | 7 | – – – – – – – – – – – – – – – – P EE D |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – E EP EP D |
| | 1/200 | 1 | – PP D | 7/8 |
| | | 2 | – WW D |
| | | 3 | – CNS CNS EE CNS EE CNS EE CNS D |
| | | 4 | – – – – – – – – – P EE D |
| | | 5 | – – – – – – – – – – – – – ? ? W PE PP PR D |
| | | 6 | – – – – – – – – – – – – – – ? P EE D |
| | | 7 | – – – – – – – – – – – – – – – – WE N CNS CNS P EE D |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – ? ? ? ? – – 3 – |

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G (CONT.) SERUM FROM CYNOMOLGUS # 1585 NORMAL + LANSING | $10^{-3}$ | 1 | – | ? | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 |
| | | 2 | – | – | – | E | E | E | E | E | E | E | E | E | – | PP | D | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | E | – | – | – | – | – | – | TY ? | ? | TY ? | TY | ? | EE | P D | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | E | – | – | – | – | – | – | – | – | – | – | – | ? | ? | P | | D | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | | ? | PP |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| H SERUM FROM CYNOMOLGUS # 1585 AUTOCLAVED COW'S MILK FOLLOWED BY VIRUS. POST Y-SK + LANSING | 1/40 | 1 | – | PP EE | PP EE | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 |
| | | 2 | – | – | P | PP EE | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | ? | ? | P | P | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | ? | EE | PP EE | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | ? | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | | D | |
| | 1/200 | 1 | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 |
| | | 2 | – | – | ? | ? | ? | ? | – | ? | – | – | – | ? | E | ? EE | E | E | PP EE | D | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W | WP | WP EE | D | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P | | D | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | PE | D |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | $10^{-3}$ | 1 | – | – | – | – | – | – | – | – | WW | WP | WW | WP | WW | WP | D | | | | | | | | | | | | | | | | | | | | | 2/8 |
| | | 2 | – | – | – | – | – | – | – | – | WW | WW | WP | WP | ? | ? | – | – | – | – | – | – | – | – | – | – | – | – | PE | | D | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | – | – | ? | – | ? TY | | TY TY |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |

$10^{-2.6}$

Oct. 16, 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|
| CONTROL · LANSING + SALINE | 1/200 | 1 | | 10/10 | $10^{-3.4}$ |
| | | 2 | | | |
| | | 3 | | | |
| | | 4 | | | |
| | | 5 | | | |
| | | 6 | | | |
| | | 7 | | | |
| | | 8 | | | |
| | | 9 | | | |
| | | 10 | | | |
| | 1/200 | 1 | | 10/10 | |
| | | 2 | | | |
| | | 3 | | | |
| | | 4 | | | |
| | | 5 | | | |
| | | 6 | | | |
| | | 7 | | | |
| | | 8 | | | |
| | | 9 | | | |
| | | 10 | | | |
| | $10^{-3}$ | 1 | | 8/10 | |
| | | 2 | | | |
| | | 3 | | | |
| | | 4 | | | |
| | | 5 | | | |
| | | 6 | | | |
| | | 7 | | | |
| | | 8 | | | |
| | | 9 | | | |
| | | 10 | | | |

| SPECIMEN | VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|
| I (CONT.) CONTROL | $10^{-3}$ | 1 | — — P D | 7/10 |
| | | 2 | — — P D | |
| | | 3 | — — ? P D | |
| | | 4 | — — — ? P P D | |
| | | 5 | — — — — ? ? — — ■ W ? ? — — — D | |
| | | 6 | — — — — — — — ? — — — — — — ? ? ? — — — — — — —

# SUMMARY OF TEST OF DECEMBER 28, 1950

## TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS #1598 | NORMAL | 8/8 | 8/8 | 5/8 | — | 3.2 | 2 |
| | POST Y-SK | 1/8 | 0/8 | 0/5 | — | 1.3 | 160 |
| CYNOMOLGUS #1601 | NORMAL | 8/8 | 7/8 | 6/8 | — | 3.2 | 2 |
| | POST Y-SK | 5/8 | 0/8 | 1/8 | — | 1.8 | 50 |
| CYNOMOLGUS #1602 | NORMAL | 8/8 | 8/8 | 6/8 | — | 3.3 | 2 |
| | POST Y-SK | 4/8 | 2/5 | 0/7 | — | 1.8 | 50 |
| CYNOMOLGUS #1609 | NORMAL | 8/8 | 8/8 | 6/8 | — | 3.3 | 2 |
| | POST Y-SK | 2/8 | 0/4 | 0/8 | — | 1.4 | 130 |
| CONTROL | | — | 8/8 | 6/8 | 2/8 | 3.5 | |

DEC 28 1950

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

PURPOSE: To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk (which neutralizes polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus

PROCEDURE: 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500; giving final dilutions of virus 1/40, 1/200, 1/1000. Virus controls consisted of 1:200, $10^{-3}$ and $10^{-4}$ dilutions in saline. The mixtures were shaken and incubated at room temperature for 1 hour.

VIRUS: Lansing virus: Pool II of 6/6/50. 10% suspension in saline. Centrifuged 2000 rpm. for 10 minutes

MICE: 18-20 gram ♀ Maxfield 8 mice per dilution

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| C | 1601 NORMAL | 8/8 | 7/8 | 6/8 | — |
| D | 1601 POST Y-SK | 5/8 | 0/8 | 1/8 | — |
| E | 1602 NORMAL | 8/8 | 8/8 | 6/8 | — |
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| G SERUM FROM CYNOMOLGUS # 1609 + LANSING NORMAL | 1:40 | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | $10^{-3.3}$ N.I. 4 2 |
| | | 2 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | | – | – | – | – | – | | P | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | | – | – | – | – | – | | – | PPP | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | | – | – | – | – | – | | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | L.D50 |
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| G (CONT.) SERUM FROM CYNOMOLGUS # 1609 + LANSING NORMAL | $10^{-3}$ | 1 | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | |
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| H SERUM FROM CYNOMOLGUS # 1609 + LANSING POST Y-SK | 1:40 | 1 | – | – | – | | – | ? | – | – | | | ? | – | D | | | | | | | | | | | | | | | | | | | | | 2/8 | $10^{-1.4}$ N.I. " 130 |
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MISSING 1/17/51

MISSING 1/17/51 Kidney liver top

MISSING 1/17/51

MISSING 1/17/51

DEC 28 1950

| SPECIMEN | VIRUS | NO | 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 | MORTALITY | $LD_{50}$ |
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| CONTROL | 1:200 | 1 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | $10^{-3.5}$ |
| | | 2 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 4 | – | – | – | | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SALINE + LANSING | $10^{-3}$ | 1 | – | : | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | |
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SUMMARY OF TEST OF DECEMBER 29, 1950

TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS #1603 | NORMAL | — | 8/8 | 4/8 | — | 3.0 | 12 |
| | POST Y-SK | 2/8 | 2/8 | 5/7 | — | 1.9 | 160 |
| CYNOMOLGUS #1610 | NORMAL | 7/8 | 6/8 | 7/8 | — | 3.2 | 8 |
| | POST Y-SK | 6/8 | 5/8 | 1/8 | — | 2.4 | 50 |
| CYNOMOLGUS #1612 | NORMAL | 7/8 | 6/7 | 5/8 | — | 3.0 | 12 |
| | POST Y-SK | 2/8 | 3/8 | 0/8 | — | 1.5 | 400 |
| CYNOMOLGUS #1619 | NORMAL | 8/8 | 8/8 | 4/7 | — | 3.1 | 10 |
| | POST Y-SK | 0/8 | 0/8 | 0/7 | — | 1.2 | 790 |
| CYNOMOLGUS #1626 | NORMAL | 6/8 | 4/6 | 3/7 | — | 2.6 | 32 |
| | POST Y-SK | — | 0/9 | — | — | 1.9-? | 160+? |
| CONTROL | | — | 8/8 | 6/8 | 5/7 | 4.1 | |

DEC 29 1950

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

**PURPOSE:** To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk (which neutralizes polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus.

**PROCEDURE:** 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500, giving final dilutions of virus 1:40, 1:200, 1:1000. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixtures were shaken and incubated at room temperature for 1 hour.

**VIRUS:** Lansing virus: Pool II of 6/16/50. 10% suspension in saline. Centrifuged 2000 r.p.m. for 10 minutes.

**MICE:** 18-20 gram ♀ Mayfield 8 mice per dilution

| CODE | CYNOMOLGUS # | | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|---|
| A | 1603 | -NORMAL | — | 8/8 | 4/8 | — |
| B | 1603 | -POST Y-SK | 2/8 | 2/8 | 5/7 | — |
| C | 1610 | NORMAL | 7/8 | 6/8 | 7/8 | — |
| D | 1610 | POST Y-SK | 6/8 | 5/8 | 1/8 | — |
| E | 1612 | NORMAL | 7/8 | 6/7 | 5/8 | — |
| F | 1612 | POST Y-SK | 2/8 | 3/8 | 0/8 | — |
| G | 1619 | NORMAL | 8/8 | 8/8 | 4/7 | — |
| H | 1619 | POST Y-SK | 0/8 | 0/8 | 0/7 | — |
| I | 1626 | NORMAL | 6/8 | 4/6 | 3/7 | — |
| J | 1626 | POST Y-SK | — | 0/9 | — | — |
| K | CONTROL | | — | 8/8 | 6/8 | 5/7 |

DEC 29 1950

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|
| A<br>SERUM FROM CYNOMOLGUS #1603 | 1:40 | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8 | insufficient serum | | $10^{-3.0}$<br>N.I.<br>"<br>12 |
| +<br>LANSING<br>NORMAL | 1:200 | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8 | | 8/8 | |
| | $10^{-3}$ | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8 | | 4/8 | |
| B<br>SERUM FROM CYNOMOLGUS #1603<br>+<br>LANSING<br>POST Y-SK | 1:40 | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8 | | 2/8 | $10^{-1.9}$<br>N.I.<br>"<br>160 |

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| B (CONT.) SERUM FROM CYNOMOLGUS # 1603 + LANSING | 1:200 | 1 | – | – | | CNS | CNS | CNS | CNS? | D | ? | | | | | | | | – | D | ? | | | | | | | | | | | | | | | | | ? |
| | | 2 | – | – | | – | – | – | – | ? | | CNS | CNS | ? | ? | – | – | | – | D | ? | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | ? | | ? | ? | ? | – | – | – | | CNS | CNS | CNS? | ? | – | 2/8 | |
| | | 4 | – | – | | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | |
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| LANSING | $10^{-3}$ | 1 | – | – | | – | – | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | ? | |
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| | | 3 | – | – | | – | – | – | – | ? | | PP | PP | PP | PP | PP | PP | | PP | D | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | | – | – | – | – | – | | – | – | – | TY | D | TYPHOID | | – | – | | | | | | | | | | | | | | | | | 5/7 | |
| POST Y-SK | | 5 | – | – | | – | – | – | – | – | | – | – | – | – | – | | | – | – | ? | ? | ? | D | | D | | | | | | | | | | | | | |
| | | 6 | – | – | | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | | | | | | | | | | | | | | |
| | | 7 | – | – | | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | ? | ? | – | – | | |
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| C SERUM FROM CYNOMOLGUS # 1610 + LANSING | 1:40 | 1 | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2/8 | $10^{-3.2}$ N.I. 1/8 |
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| SPECIMEN | VIROS | No. | 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 | MORTALITY | LD50 |
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| SERUM FROM CYNOMOLGUS #1626 | | 5 | – | – | | – | – | – | – | | | – | – | – | – | – | | | . | P | D | | | | | | | | | | | | | | | | | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| | | 8 | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P | P | D | | | | | | | | | | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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# SUMMARY OF TEST OF JANUARY 10, 1951

## TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGI GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS #1599 | NORMAL | 8/8 | 8/8 | 7/8 | — | 3.4 | 8 |
| | POST Y-SK | 2/8 | 1/7 | 1/8 | — | 1.5 | 630 |
| CYNOMOLGUS #1600X Paralyzed 8th day | NORMAL | 5/8 | 2/8 | 4/8 | — | 1.9 | 250 |
| | POST Y-SK | 1/8 | 0/8 | 0/8 | — | 1.3 | 1000 |
| CYNOMOLGUS #1606 Remained well | NORMAL | 6/8 | 5/8 | 2/8 | — | 2.4 | 80 |
| | POST Y-SK | 2/8 | 1/8 | 1/8 | — | 1.5 | 630 |
| CYNOMOLGUS #1607 | NORMAL | 7/7 | 8/8 | 8/8 | — | 3.5 | 6 |
| | POST Y-SK | 1/7 | 1/8 | 0/8 | — | 1.4 | 800 |
| CYNOMOLGUS #1608 | NORMAL | 8/8 | 8/8 | 5/7 | — | 3.3 | 10 |
| | POST Y-SK | 4/8 | 0/7 | 2/8 | — | 1.8 | 320 |
| CONTROL | | — | 7/7 | 8/8 | 5/7 | 4.3 | |

JAN 10 1951

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

PURPOSE: To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk (which neutralize polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus.

PROCEDURE: 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100 1:500; giving final dilutions of virus 1:40, 1:200, 1:1000. Virus controls consisted of 1:200, $10^{-3}$ $10^{-4}$ dilutions made in saline. The mixtures were shaken and incubated at room temperature for 1 hour.

VIRUS: Lansing virus: Pool II of 6/6/50. 10% suspension in saline. Centrifuged 2600 rpm for 10 minutes.

MICE: 18-20 gram ♀ Mayfield 8 mice per dilution

| CODE | CYNOMOLGUS # | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | 1599 - NORMAL | 8/8 | 8/8 | 7/8 | — |
| B | 1599 - POST Y-SK | 2/8 | 1/7 | 1/8 | — |
| C | 1600X - NORMAL | 5/8 | 2/8 | 1/8 | — |
| D | 1600X - POST Y-SK | 1/8 | 0/8 | 0/8 | — |
| E | 1606 - NORMAL | 6/8 | 5/8 | 2/8 | — |
| F | 1606 - POST Y-SK | 2/8 | 1/8 | 1/8 | — |
| G | 1607 - NORMAL | 7/7 | 8/8 | 8/8 | — |
| H | 1607 - POST Y-SK | 1/7 | 1/8 | 0/8 | — |
| I | 1608 - NORMAL | 8/8 | 8/8 | 5/7 | — |
| J | 1608 - POST Y-SK | 4/8 | 2/7 | 2/8 | — |
| K | CONTROL | — | 7/7 | 8/8 | 5/7 |

JAN 10 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| A<br>SERUM FROM CYNOMOLGUS # 1599 | 1:40 | 1 | — | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | $10^{-3.4}$ |
| | | 2 | — | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | PR | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | — | — | | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | — | — | — | | — | — | — | — | — | — | | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | P | | D | | | | | | | | | | | | | | | | | | |
| + LANSING NORMAL | 1:200 | 1 | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 2 | — | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | PP PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | — | ? | | : | — | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | — | — | — | | — | — | — | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | — | — | — | | — | — | — | — | — | — | | — | ? | D | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | — | — | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 2 | — | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | — | | — | ? | : | ? | — | — | | — | — | — | P | D | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | P | | D | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | : | P | D | | | | | | | | | | | | | | | | |
| | | 6 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | P | D | | | | | | | | | | | | | | | |
| | | 7 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | PP | P PP | D | | | | | | | | |
| | | 8 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | | |
| B<br>SERUM FROM CYNOMOLGUS # 1599 + LANSING POST Y-SK | 1:40 | 1 | — | — | — | | — | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2/8 | $10^{-1.5}$ |
| | | 2 | — | — | — | | — | — | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | | |
| | | 4 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | | |
| | | 5 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | | |
| | | 6 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | | |
| | | 7 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | | |
| | | 8 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | | |

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B (CONT.) SERUM FROM CYNOMOLGUS # 1599 + LANSING POST Y-SK | 1:200 | 1 | — | CNS | CNS | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/7 | |
| | | 2 | — | CNS | CNS TY | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | ? | | ? | ? | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | — | — | | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | ? | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/8 | |
| | | 2 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | ? | ? | | | | | |
| | | 3 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | — | — | — | | — | — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C SERUM FROM CYNOMOLGUS # 1600X + LANSING NORMAL | 1:40 | 1 | — | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 | $10^{-1.9}$ |
| | | 2 | — | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | ? | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | — | | — | — | — | — | ? | | | ? | ? | — | — | — | — | — | — | — | — | — | — | — | D | | | | | | | | | | | | |
| | | 6 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | | | | | | | |
| | | 7 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | | | | | | | |
| | | 8 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | | | | | | | | | |
| | 1:200 | 1 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | 1E | D | | | | | | | | | | 2/8 | |
| | | 2 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ? | ? | P | D | | | | | | |
| | | 3 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 4 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 5 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 6 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 7 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | | 8 | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

STANDARD B & P "NoTEAR"

JAN 10 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | | 1 | – | · | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | FE | D | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS # 1600X + LANSING NORMAL | $10^{-3}$ | 2 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | 1/8 | |
| | | 3 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| D | | 1 | – | – | – | | – | ? | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-1.3}$ |
| SERUM FROM CYNOMOLGUS # 1600X + LANSING POST Y-SK | 1:40 | 2 | – | – | – | | – | – | – | ? | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | 1/8 | |
| | | 3 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| + | | 1 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| LANSING POST Y-SK | 1:200 | 2 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | 0/8 | |
| | | 3 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 1 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 2 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 3 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | $10^{-3}$ | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | 0/8 | |
| | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | | |

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| E | | 1 | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:40 | 4 | – | – | – | | ? | ? | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1606 | | 5 | – | – | – | | – | – | – | – | – | – | | E | P P E E | D | | | | | | | | | | | | | | | | | | | | | | 6/8 | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | ? | P | | | | | | | | | | | | | | | | | | | | | | |
| + | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | : | | – | – | – | – | – | | | – | – | WW ? | WW ? | ? | ? | | – | – | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | | |
| | | 1 | – | ? | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LANSING | | 2 | – | – | – | | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | | – | – | – | – | – | – | | – | P | D | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:200 | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | P | P | R | | D | | | | | | | | | | | | | | | | | |
| NORMAL | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | : | P P E | D | | | | 5/8 | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | ? | ? | – | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | | |
| | | 1 | – | – | ? | | P | P | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | | |
| | $10^{-3}$ | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | 2/8 | |
| | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | | |
| F | | 1 | – | – | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-1.5}$ |
| | | 2 | – | – | – | | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1606 | | 3 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | ? CNS | ? CNS | CNS | | (N)S | CNS | ? CNS | ? | ? | – | – | – | – | | |
| | 1:40 | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | 2/8 | |
| + | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| LANSING | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| POST X-SK | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |

JAN 10 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|
| F (CONT.) SERUM FROM CYNOMOLGUS #1606 + LANSING POST Y-SK | 1:200 | 1 | – D | 1/8 | |
| | | 2 | – – –

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G | | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1607 | | 3 | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 4 | – | ? | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| + | | 5 | – | – | CNS | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| LANSING | | 6 | – | – | – | – | – | – | – | – | | | | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | | | | PR | D | | | | | | | | | | | | | | | | | | | | | | | | |
| NORMAL | | 8 | – | – | – | – | – | – | – | – | | | | – | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | |
| H | | 1 | – | # TY | | D | TYPHOID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-1.4}$ |
| | | 2 | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | ? | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | 1:40 | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| SERUM FROM CYNOMOLGUS # 1607 | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1/7 | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| + | | 1 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | ? | – | – | – | – | – | ? | – | – | ? | ? | ? | – | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| LANSING | 1:200 | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1/8 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| POST Y-SK | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | $10^{-3}$ | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 0/8 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |

STANDARD B & P "NOTEAR"
STANDARD B & P "NOTEAR"

JAN 10 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|
| I | | 1 | – D | | $10^{-3.3}$ |
| | | 2 | – D | | |
| | | 3 | – PP D | | |
| | 1:70 | 4 | – P D | | |
| SERUM FROM CYNOMOLGUS #1608 | | 5 | – P PP D | 8/8 | |
| | | 6 | – – – – ? PP EE D | | |
| | | 7 | – – – – – – – – – – – – PPP D | | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – ? PP PP D | | |
| + | | 1 | – P D | | |
| | | 2 | – P PP D | | |
| | | 3 | – ? P D | | |
| LANSING | 1:200 | 4 | – – CNS D | 8/8 | |
| | | 5 | – – – P P D | | |
| NORMAL | | 6 | – – – – – ? E D | | |
| | | 7 | – – – – – – – – ? D | | |
| | | 8 | – – – – – – – – – – – – – – – – ? ? P P EE D | | |
| | | 1 | (D) | | |
| | | 2 | – D | | |
| | | 3 | – P D | | |
| | $10^{-3}$ | 4 | – – P D | 5/7 | |
| | | 5 | – – – D | | |
| | | 6 | – – – ? CNS CNS CNS CNS ? CNS ? CNS D | | |
| | | 7 | – – – – – – – – – – – – – – – – – – –

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| J (CONT.) SERUM FROM CYNOMOLGUS #1608 + LANSING POST Y-SK | 1:200 | 1 | – | ? | S | | (S) | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0/7 | |
| | | 2 | – | – | – | | – | – | – | – | ↓ | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 3 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | $10^{-3}$ | 1 | – | – | – | | – | – | – | – | – | – | | ? | PP | EE | D | | | | | | | | | | | | EE | D | | | | | | | | |
| | | 2 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 3 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 4 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | | |
| K CONTROL SALINE + LANSING | 1:20 | 1 | ⊖ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/7 | $10^{-4.3}$ |
| | | 2 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | | – | – | – | – | – | – | | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | ? | ? | EE | D | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | ? | D | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | EE | D | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | PP CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | PD | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | CNS | CNS | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

JAN 10 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K (CONT.) CONTROL | | 1 | – | ? | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10⁻⁴ | 4 | – | – | – | | – | – | | | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SALINE + LANSING | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | 5/7 |
| | | 6 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | H | H | H | H | D | | | | | | | | | | |
| | | 7 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | |
| | | 8 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | |

SUMMARY OF TEST OF JANUARY 11, 1951

TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGI GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS # 1611 | NORMAL | 8/8 | 7/7 | 2/7 | — | 2.8 | 8 |
| | POST Y-SK | 3/8 | 3/8 | 1/7 | — | 1.8 | 80 |
| CYNOMOLGUS # 1613 | NORMAL | 8/8 | 8/8 | 6/8 | — | 3.3 | 2 |
| | POST Y-SK | 2/8 | 0/8 | 1/8 | — | 1.4 | 200 |
| CYNOMOLGUS # 1614 | NORMAL | 8/8 | 7/7 | 7/8 | — | 3.4 | 2 |
| | POST Y-SK | 6/8 | 0/7 | 1/8 | — | 1.9 | 63 |
| CYNOMOLGUS # 1615 | NORMAL | 8/8 | 8/8 | 5/8 | — | 3.2 | 3 |
| | POST Y-SK | 2/8 | 1/8 | 0/8 | — | 1.4 | 200 |
| CYNOMOLGUS # 1616X | NORMAL | 7/8 | 8/8 | 5/8 | — | 3.1 | 4 |
| | POST Y-SK | 0/8 | 1/8 | 0/8 | — | 1.3 | 250 |
| CONTROL | | — | 8/8 | 8/8 | 2/8 | 3.7 | |

JAN 11 1951

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

PURPOSE: To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk (which neutralizes polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus.

PROCEDURE: 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500 giving final dilutions of virus 1:40, 1:200, $10^{-3}$. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixtures were shaken and incubated at room temperature for 1 hour.

VIRUS: Lansing virus: Pool V of 6/6/50. 10% suspension in saline. Centrifuged 2000 rpm for 10 minutes.

MICE: 18-20 gram ♀ Maxfields 8 mice per dilution

| CODE | CYNOMOLGUS # | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | 1611 - NORMAL | 8/8 | 7/8 | 2/7 | — |
| B | 1611 - POST Y-SK | 3/8 | 3/8 | 1/7 | — |
| C | 1613 - NORMAL | 8/8 | 8/8 | 6/8 | — |
| D | 1613 - POST Y-SK | 2/8 | 0/8 | 1/8 | — |
| E | 1614 - NORMAL | 8/8 | 7/7 | 7/8 | — |
| F | 1614 - POST Y-SK | 6/8 | 0/7 | 1/8 | — |
| G | 1615 - NORMAL | 8/8 | 8/8 | 5/8 | — |
| H | 1615 - POST Y-SK | 2/8 | 1/8 | 0/8 | — |
| I | 1616X - NORMAL | 7/8 | 8/8 | 5/8 | — |
| J | 1616X - POST Y-SK | 0/8 | 1/8 | 0/8 | — |
| K | CONTROL | — | 8/8 | 8/8 | 2/8 |

JAN 11 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | 1 | — | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | — | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:40 | 4 | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | $10^{-2.8}$ |
| | | 5 | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | NI |
| SERUM FROM | | 6 | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | = |
| CYNOMOLGUS | | 7 | — | — | | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| # 1611 | | 8 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | P | | D | | | | | | | | | | | | | | | | | | | |
| + | | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | P* | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | CNS | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:200 | 4 | — | — | | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/7 | |
| LANSING | | 5 | — | — | | CNS | CNS | CNS | CNS | CNS | CNS | | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | — | | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NORMAL | | 7 | — | — | | — | — | — | — | — | — | | ? | ? | ? | ? | — | — | | — | ? | P EE | PP EE PP | D | | | | | | | | | | | | | | | |
| | | 8 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | ? | ? | | ? TY | ? TY | D | TYPHOID | | | | | | | | | |
| | | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | — | — | | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | | — | — | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 4 | — | — | | — | — | — | — | — | — | | ? | ? | — | — | ? | ? | | — | — | — | — | — | — | | — | — | — | — | — | ? | | ? | ? | — | — | 2/7 | |
| | | 5 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | |
| | | 6 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | |
| | | 7 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | |
| | | 8 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | |
| B | | 1 | — | ? | | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | — | — | | — | P PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM | | 3 | — | — | | — | P PP | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/8 | $10^{-1.8}$ |
| CYNOMOLGUS #1611 | 1:40 | 4 | — | — | | — | ? | ? | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | NI |
| + | | 5 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | = |
| LANSING | | 6 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | 80 |
| | | 7 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | |
| POST Y-SK | | 8 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | | |

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B (CONT.) SERUM FROM CYNOMOLGUS #1611 + LANSING POST Y-SK | 1:200 | 1 | ? | CNS | | ? CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/8 | |
| | | 2 | — | ? | | — | ? | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | | — | — | — | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | | — | — | — | — | — | | — | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | | 5 | — | — | | — | — | — | — | — | | — | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | | 6 | — | — | | — | — | — | — | — | | — | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | | 7 | — | — | | — | — | — | — | — | | — | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | | 8 | — | — | | — | — | — | — | — | | — | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| LANSING POST Y-SK | $10^{-3}$ | 1 | — | — | | — | — | — | TY | TY | TY | | D | TY | PHOID | | | | | | | | | | | | | | | | | | | | | | | 1/7 | |
| | | 2 | — | — | | — | — | — | — | TY | TY | | TY | TY | TY | TY | TY | ? | | — | — | — | TY | TY | TY | TY | TY | TY | TY | ? | ? | — | — | — | — | | | | |
| | | 3 | — | — | | — | — | — | — | — | — | | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | |
| | | 5 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | |
| | | 6 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | |
| | | 7 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | |
| | | 8 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | | — | — | — | — | — | | | — | — | — | — | — | — | — | — | — | — | — | |
| C SERUM FROM CYNOMOLGUS #1613 + LANSING NORMAL | 1:40 | 1 | — | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-3.3}$ |
| | | 2 | — | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | NI |
| | | 3 | — | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | 4 | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| | | 5 | — | — | | ? | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | — | | — | — | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | — | — | | — | — | — | — | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | — | — | | — | — | — | — | — | — | | — | — | — | — | D | | | | | | | | | | | | | | | | | | | | | |
| | 1:200 | 1 | — | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 2 | — | — | | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | | — | — | — | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | — | — | | — | — | — | — | — | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | — | | — | — | — | — | — | — | | P | P | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | — | | — | — | — | — | — | — | | — | — | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | P | P | D | | | | | | | | | | | | | | | | |
| | | 8 | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | n→ | D | | | | | | | | | | | | | | | | | |

JAN 11 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| C (CONT.) | | 1 | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM | | 3 | – | – | | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYNOMOLGUS #1613 | $10^{-3}$ | 4 | – | – | | – | – | – | – | | ? | | – | – | – | – | – | – | | P | D | | | | | | | | | | | | | | | | | | |
| + | | 5 | – | – | | – | – | – | – | | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | W E | D | | | | | | | | | | 6/8 | |
| LANSING | | 6 | – | – | | – | – | – | – | | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | P E E | P E E | D | | | | | | | | |
| | | 7 | – | – | | – | – | – | – | | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | ? | | ? | ? | – | – | | |
| NORMAL | | 8 | – | – | | – | – | – | – | | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| D | | 1 | – | – | | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | | – | ? | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | ? | – | – | | – | – | – | – | | |
| | 1:40 | 4 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | 2/8 | $10^{-1.7}$ |
| SERUM FROM | | 5 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | NI |
| CYNOMOLGUS | | 6 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | = |
| # 1613 | | 7 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | 200 |
| | | 8 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| + | | 1 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 2 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 3 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| LANSING | 1:200 | 4 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | 0/8 | |
| | | 5 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| POST Y-5K | | 6 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 7 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 8 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 1 | – | CNS | | CNS | CNS | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 3 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | $10^{-3}$ | 4 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | 1/8 | |
| | | 5 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 6 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 7 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |
| | | 8 | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | | |

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| E | | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:40 | 4 | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | NI |
| | | 5 | – | P | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | " |
| SERUM FROM CYNOMOLGUS # 1614 | | 6 | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| | | 7 | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | | – | – | – | – | P E E | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| + | | 1 | Ⓓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:200 | 4 | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/7 | |
| LANSING | | 5 | – | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | | P P D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NORMAL | | 7 | – | – | | – | – | – | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | | – | – | – | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | | P R D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 4 | – | – | | ? | ? | – | – | – | – | – | – | – | CNS | CNS | CNS | CNS | CNS | ? CNS | ? CNS | ? | ? | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 7/8 | |
| | | 5 | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P | D | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | W | D | | | | | | | | | | | | | | |
| | | 8 | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P P P | D | | | | | | | | | | | | |
| F | | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | P P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1614 | 1:40 | 4 | – | ? | | P P D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | NI |
| + | | 5 | – | – | | – | P R | P R | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | " |
| LANSING | | 6 | – | – | | – | ? | ? | ? | ? | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | 63 |
| | | 7 | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| CONTROL | | 5 | – | – | | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| LANSING | $10^{-3}$ | 4 | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
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STANDARD B & P "NOTEAR"
STANDARD B & P "NOTEAR"

JAN 11 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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SUMMARY OF TEST OF JANUARY 16, 1951

TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS #1628X | NORMAL | 7/8 | 7/8 | 5/8 | — | 3.0 | 3 |
| | POST Y-SK | 1/8 | 0/8 | 0/8 | — | 1.3 | 160 |
| CYNOMOLGUS #1629 | NORMAL | 8/8 | 7/8 | 6/8 | — | 3.2 | 2 |
| | POST Y-SK | 5/6 | 5/7 | 2/7 | — | 2.6 | 8 |
| CYNOMOLGUS #1630 | NORMAL | 7/8 | 4/8 | 5/8 | — | 2.7 | 6 |
| | POST Y-SK | 6/8 | 4/7 | 3/8 | — | 2.5 | 10 |
| CYNOMOLGUS #1631 | NORMAL | 8/8 | 7/8 | 4/8 | — | 2.9 | 4 |
| | POST Y-SK | 5/8 | 2/8 | 0/8 | — | 1.9 | 40 |
| CYNOMOLGUS #1632 | NORMAL | 7/8 | 7/8 | 4/8 | — | 2.9 | 4 |
| | POST Y-SK | 8/8 | 8/8 | 7/7 | — | 3.4 | 1 |
| CONTROL | | — | 8/8 | 5/8 | 3/8 | 3.5 | |

JAN 16 1951

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

PURPOSE: To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral found in human milk (which neutralize polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus.

PROCEDURE: 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:400, 1:500; giving final dilutions of virus 1:40, 1:200, 1:1000. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixtures were shaken and inculated at room temperature for 1 hour. Inoculation time the tubes were in an ice bath.

VIRUS: Lansing virus: Pool II 6/6/50. 10% suspension in saline. Centrifuged 2000 rpm for 10 minutes.

MICE: 18-20 gram Maxfield albino ♀ 8 mice per dilution

| CODE | CYNOMOLGUS # | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | 1628X - NORMAL | 7/8 | 7/8 | 5/8 | — |
| B | 1628X - POST Y-SK | 1/8 | 0/8 | 0/8 | — |
| C | 1629 - NORMAL | 8/8 | 7/8 | 6/8 | — |
| D | 1629 - POST Y-SK | 5/6 | 5/7 | 2/7 | — |
| E | 1630 - NORMAL | 7/8 | 4/8 | 5/8 | — |
| F | 1630 - POST Y-SK | 6/8 | 4/7 | 3/8 | — |
| G | 1631 - NORMAL | 8/8 | 7/8 | 4/8 | — |
| H | 1631 - POST Y-SK | 5/8 | 2/8 | 0/8 | — |
| I | 1632 - NORMAL | 7/8 | 7/8 | 4/8 | — |
| J | 1632 - POST Y-SK | 8/8 | 7/8 | 7/7 | — |
| K | CONTROL | — | 8/8 | 5/8 | 3/8 |

JAN 16 1951

| SPECIMEN | VIRUS | No. | 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 | MORTALITY | $LD_{50}$ |
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| SERUM FROM CYNOMOLGUS #1629 | | 5 | – | – | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | " |
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JAN 16 1957

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| C (CONT.) SERUM FROM CYNOMOLGUS #1629 + LANSING NORMAL | $10^{-3}$ | 1 | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | |
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| | | 4 | – | – | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| SERUM FROM | | 5 | – | – | – | – | | – | – | – | – | P EE | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
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STANDARD B & P "NOFEAR"

JAN 18 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | L D 50 |
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# SUMMARY OF TEST OF JANUARY 17, 1951

## TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS #1633 | NORMAL | 8/8 | 6/8 | 4/8 | — | 2.8 | 5 |
| | POST Y-SK | 2/8 | 0/8 | 1/8 | — | 1.4 | 130 |
| CYNOMOLGUS #1634X | NORMAL | 8/8 | 7/8 | 7/8 | — | 3.4 | 1 |
| | POST Y-SK | 3/7 | 0/8 | 0/8 | — | 1.5 | 100 |
| CYNOMOLGUS #1635 | NORMAL | 8/8 | 8/8 | 6/8 | — | 3.3 | 2 |
| | POST Y-SK | 2/8 | 1/8 | 1/8 | — | 1.5 | 100 |
| CYNOMOLGUS #1636 | NORMAL | 8/8 | 8/8 | 7/8 | — | 3.4 | 1 |
| | POST Y-SK | 3/8 | 0/8 | 1/8 | — | 1.5 | 100 |
| CYNOMOLGUS #1637 | NORMAL | 8/8 | 6/8 | 5/8 | — | 3.0 | 3 |
| | POST Y-SK | 0/8 | 1/8 | 0/8 | — | 1.3 | 160 |
| CONTROL | | — | 7/8 | 5/8 | 3/8 | 3.5 | |

JAN 17 1951

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTI BODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

PURPOSE: To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk (which neutralizes polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus.

PROCEDURE: 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100 1:500; giving final dilutions of virus 1:40, 1:200, 1:1000. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixture were shaken and incubated at room temperature for 1 hour.

VIRUS: Lansing virus: Pool II of 6/16/50. 10% suspension in saline. Centrifuged 2000 rpm. for 10 minutes.

MICE: 18-20 gram ♀ Mayfield 8 mice per dilution

| CODE | CYNOMOLGUS # | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | 1633 - NORMAL | 8/8 | 6/8 | 4/8 | — |
| B | 1633 - POST Y-SK | 2/8 | 0/8 | 1/8 | — |
| C | 1634X - NORMAL | 8/8 | 7/8 | 7/8 | — |
| D | 1634X - POST Y-SK | 3/7 | 0/8 | 0/8 | — |
| E | 1635 - NORMAL | 8/8 | 8/8 | 6/8 | — |
| F | 1635 - POST Y-SK | 2/8 | 1/8 | 1/8 | — |
| G | 1636 - NORMAL | 8/8 | 8/8 | 7/8 | — |
| H | 1636 - POST Y-SK | 3/8 | 0/8 | 1/8 | — |
| I | 1637 - NORMAL | 8/8 | 6/8 | 5/8 | — |
| J | 1637 - POST Y-SK | 0/8 | 1/8 | 0/8 | — |
| K | CONTROL | — | 7/8 | 5/8 | 3/8 |

JAN 17 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| CYNOMOLGUS #1635 | 1:40 | 4 | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | 2/8 | N.I. |
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| SERUM FROM CYNOMOLGUS #1635 + LANSING POST Y-SK | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | | |
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| SERUM FROM CYNOMOLGUS #1636 + LANSING NORMAL | | 5 | – | – | – | | – | – | – | – | – | – | | P | P RE | D | | | | | | | | | | | | | | | | | | | | | | | |
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| H SERUM FROM CYNOMOLGUS #1636 + LANSING POST Y-SK | 1:40 | 1 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/8 | $10^{-1.5}$ N.D. 4 100 |
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JAN 17 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SERUM FROM CYNOMOLGUS #1637 | | 5 | – – – ? ? CNS CNS D | 8/8 | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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JAN 17 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SALINE + LANSING | | 5 | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | |
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# SUMMARY OF TEST OF JANUARY 18, 1951

## TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS #1617X | NORMAL | 7/8 | 7/8 | 8/8 | — | 3.4 | −2 |
| | POST Y-SK | 4/8 | 2/8 | 0/8 | — | 1.8 | 20 (50) |
| CYNOMOLGUS #1618 | NORMAL | 8/8 | 8/8 | 7/8 | — | 3.4 | −2 |
| | POST Y-SK | 1/8 | 1/8 | 0/8 | — | 1.3 | 63 |
| CYNOMOLGUS #1622 | NORMAL | 8/8 | 6/8 | 7/8 | — | 3.3 | −2 |
| | POST Y-SK | 8/8 | 8/8 | 8/8 | — | 3.5 | −2 |
| CYNOMOLGUS #1623 | NORMAL | 8/8 | 7/8 | 6/8 | — | 3.2 | −1 |
| | POST Y-SK | 5/8 | 3/8 | 1/8 | — | 2.0 | 13 (32) |
| CYNOMOLGUS #1624X | NORMAL | 8/8 | 8/8 | 6/8 | — | 3.3 | −2 |
| | POST Y-SK | 5/8 | 1/8 | 1/7 | — | 1.9 | 16 (40) |
| CYNOMOLGUS #1625 | NORMAL | 8/8 | 8/8 | 5/8 | — | 3.2 | −1 |
| | POST Y-SK | 3/7 | 1/8 | 2/8 | — | 1.8 | 20 (50) |
| CYNOMOLGUS #1627 | NORMAL | 8/8 | 8/8 | 7/8 | — | 3.4 | −2 |
| | POST Y-SK | 0/8 | 0/8 | 0/8 | — | 1.2 | 80 (200) |
| CONTROL | | — | 8/8 | 3/8 | 3/8 | 3.1 | |

Cum. 3.5

JAN 18 1951

# TEST FOR DEVELOPMENT OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

**PURPOSE:** To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus. These animals were part of an experiment in which an attempt was made to determine if the antiviral factor found in human milk (which neutralizes polio virus) would effectively neutralize Y-SK if the milk was fed before and after administration of the virus.

**PROCEDURE:** 0.2 ml of undiluted normal or post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500; giving final dilutions of virus of 1:40, 1:200, $10^{-3}$. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixtures were shaken and incubated at room temperature for 1 hour.

**VIRUS:** Lansing virus: Pool V of 6/16/50. 10% suspension in saline. Centrifuged 2000 rpm. for 10 minutes.

**MICE:** 18-20 grams ♀ Mayfield albino 8 mice per dilution

| CODE | CYNOMOLGUS # | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | 1617 X - NORMAL | 7/8 | 7/8 | 8/8 | — |
| B | 1617 X - POST Y-SK | 4/8 | 2/8 | 0/8 | — |
| C | 1618 - NORMAL | 8/8 | 8/8 | 7/8 | — |
| D | 1618 - POST Y-SK | 1/8 | 1/8 | 0/8 | — |
| E | 1622 - NORMAL | 8/8 | 6/8 | 7/8 | — |
| F | 1622 - POST Y-SK | 8/8 | 8/8 | 8/8 | — |
| G | 1623 - NORMAL | 8/8 | 7/8 | 6/8 | — |
| H | 1623 - POST Y-SK | 5/8 | 3/8 | 1/8 | — |
| I | 1624X - NORMAL | 8/8 | 8/8 | 6/8 | — |
| J | 1624X - POST Y-SK | 5/8 | 1/8 | 4/7 | — |
| K | 1625 - NORMAL | 8/8 | 8/8 | 5/8 | — |
| L | 1625 - POSK Y-SK | 3/7 | 1/8 | 2/8 | — |
| M | 1627 - NORMAL | 8/8 | 8/8 | 7/8 | — |
| N | 1627 - POST Y-SK | 0/8 | 0/8 | 0/8 | — |
| O | CONTROL | — | 8/8 | 3/8 | 3/8 |

JAN 18 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | WD50 |
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| A | | 1 | ? D | | $10^{-3.4}$ |
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| | | 3 | – – – – – D | | |
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| | | 5 | – – – – – – EE PR D | 8/8 | |
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| | | 8 | – – – – – – – – – – – – – P P P E E D | | |
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| | | 2 | – D | | |
| | | 3 | – ? ? PP PP D | | |
| SERUM FROM CYNOMOLGUS #1617X | 1:40 | 4 | – – – – – – – – P D | 4/8 | N.I. 11 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| | 1:40 | 4 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | $10^{-3.7}$ |
| SERUM FROM CYNOMOLGUS #1627 | | 5 | – | – | ? | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | N.D. |
| | | 6 | – | – | – | – | – | EPP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| | | 7 | – | – | – | – | – | – | – | – | | | | EE | PP EE | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | | | | – | – | – | EE | D | | | | | | | | | | | | | | | | | | | | | – 2 |
| + | | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 3 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LANSING | 1:200 | 4 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 5 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NORMAL | | 6 | – | – | – | – | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SERUM FROM CYNOMOLGUS #1627 | | 3 | – | – | – | – | – | – | – | – | | | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | – | – | | |
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STANDARD B & P "NoTEAR"
STANDARD B & P "NoTEAR"

JAN 18 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| SPECIMEN | VIROS | NO. | 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 | MORTALITY | LD50 |
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# SUMMARY OF TEST OF FEBRUARY 19, 1951

## TEST FOR NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS #1752 | POST Y-SK | 7/8 | 6/8 | 2/7 | — | 2.6 | 20 (40) |
| CYNOMOLGUS #1757 | POST Y-SK | 3/8 | 0/7 | 0/8 | — | 1.5 | 250 (500) |
| CYNOMOLGUS #1758 | POST Y-SK | 6/7 | 8/8 | 8/8 | — | 3.4 | 3 |
| CYNOMOLGUS #1759 | POST Y-SK | 3/8 | 1/7 | 1/8 | — | 1.6 | 200 |
| CYNOMOLGUS #1760 | POST Y-SK | 8/8 | 8/8 | 6/8 | — | 3.3 | 4 |
| CYNOMOLGUS #1761 | POST Y-SK | 2/8 | 2/8 | 0/7 | — | 1.5 | 250 |
| CYNOMOLGUS #1763 | POST Y-SK | 2/8 | 0/8 | 0/7 | — | 1.4 | 320 |
| CYNOMOLGUS #1764 | POST Y-SK | 4/8 | 2/8 | 0/8 | — | 1.8 | 130 |
| CYNOMOLGUS #1766 | POST Y-SK | 1/8 | 0/8 | 0/7 | — | 1.3 | 400 |
| CYNOMOLGUS #1769 | POST Y-SK | 2/8 | 1/8 | 0/8 | — | 1.4 | 320 |
| CONTROL | | — | 8/8 | 7/8 | 4/8 | 3.9 | |
| | | | | | Cumul. | 4.2 | |

FEB 19 1951

# TEST FOR NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

**PURPOSE:** To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus.

**VIRUS:** Lansing virus: Pool VI of 2/5/51. 10% suspension in saline. Centrifuged 2000 rpm for 15 minutes.

**MICE:** 18-20 gm Mayfield albino 8 mice per dilution

**PROCEDURE:** 0.2 ml of undiluted post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500; giving final dilutions of virus 1:40, 1:200, 1:1000. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixtures were shaken and incubated at room temperature for 1 hr. Inoculation time the tubes were in an ice bath.

| CODE | CYNOMOLGUS # | | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|---|
| A | 1752 | POST Y-SK | 7/8 | 6/8 | 2/7 | — |
| B | 1757 | POST Y-SK | 3/8 | 0/7 | 0/8 | — |
| C | 1758 | POST Y-SK | 6/7 | 8/8 | 8/8 | — |
| D | 1759 | POST Y-SK | 3/8 | 1/7 | 1/8 | — |
| E | 1760 | POST Y-SK | 8/8 | 8/8 | 6/8 | — |
| F | 1761 | POST Y-SK | 2/8 | 2/8 | 0/7 | — |
| G | 1763 | POST Y-SK | 2/8 | 0/8 | 0/7 | — |
| H | 1764 | POST Y-SK | 4/8 | 2/8 | 0/8 | — |
| I | 1766 | POST Y-SK | 1/8 | 0/8 | 0/7 | — |
| J | 1769 | POST Y-SK | 2/8 | 1/8 | 0/8 | — |
| K | CONTROL | | — | 8/8 | 7/8 | 4/8 |

FEB 19 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| A | | 1 | - PP D | | |
| | | 2 | - P D | | |
| | | 3 | - W D PP | | |
| | 1:40 | 4 | - - PP D | 7/8 | $10^{-2.6}$ |
| | | 5 | - - - D | | N.I. |
| SERUM FROM CYNOMOLGUS #1752 | | 6 | - - - - D | | " |
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| B (CONT.) SERUM FROM CYNOMOLGUS #1757 + LANSING POST Y-SK | 1:200 | 1 | (D) | 0/7 | |
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FEB 19 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| LANSING | | 8 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | 320 | |
| POST 4-SK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| J (CONT.) SERUM FROM CYNOMOLGUS #1769 + LANSING POST Y-SK | 1:200 | 1 | | 1/8 | |
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| K CONTROL SALINE + LANSING | 1:200 | 1 | | 8/8 | $10^{-3.9}$ |
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FEB 19 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SALINE | $10^{-4}$ | 4 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | p | D | | | | | | | | | | | | | | | | | | | | 4/8 | |
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# SUMMARY OF TEST OF FEBRUARY 20, 1951

## TEST FOR NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-5K BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS # 1746 | POST Y-5K | 6/8 | 4/8 | 2/6 | — | 2.3 | 50 (80) |
| CYNOMOLGUS # 1747 | POST Y-5K | 1/7 | 1/8 | 0/8 | — | 1.4 | 400 (630) |
| CYNOMOLGUS #1750 | POST Y-5K | 7/8 | 5/8 | 3/7 | — | 2.6 | 25 |
| CYNOMOLGUS #1754 | POST Y-5K | 2/8 | 1/8 | 0/8 | — | 1.4 | 400 |
| CYNOMOLGUS #1755 | POST Y-5K | 2/8 | 0/8 | 1/8 | — | 1.4 | 400 |
| CYNOMOLGUS #1767 | POST Y-5K | 8/8 | 8/8 | 8/8 | — | 3.5 | 3 (5) |
| CYNOMOLGUS #1770 | POST Y-5K | 4/8 | 3/8 | 1/8 | — | ~~2.6~~ 2.0 | ~~25~~ 400 (160) |
| CYNOMOLGUS #1771 | POST Y-5K | 5/8 | 1/8 | 1/8 | — | 1.9 | 130 |
| CYNOMOLGUS #1772 | POST Y-5K | 3/8 | 3/8 | 1/8 | — | 1.9 | 130 |
| CYNOMOLGUS #1773 | POST Y-5K | 2/8 | 4/8 | 0/8 | — | 1.6 | 250 |
| CONTROL | | — | 8/8 | 8/8 | 4/8 | 4.0 | |
| | | | | | | 4.2 | |

FEB 20 1951

# TEST FOR NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

PURPOSE: To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus.

VIRUS: Lansing virus: Pool VI of 2/5/51. 10% suspension in saline. Centrifuged 2000 rpm for 10 minutes.

PROCEDURE: 0.2 ml of undiluted post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500; giving final dilutions of virus 1:40, 1:200, 1:1000. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixtures were shaken and incubated at room temperature for 1 hr. Inoculation time the tubes were in an ice bath.

MICE: 18-20 gm Maxfield albino 8 per dilution

| CODE | CYNOMOLGUS # | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | 1746 POST Y-SK | 6/8 | 4/8 | 2/6 | — |
| B | 1747 POST Y-SK | 1/7 | 1/8 | 0/8 | — |
| C | 1750 POST Y-SK | 7/8 | 5/8 | 3/7 | — |
| D | 1754 POST Y-SK | 2/8 | 1/8 | 0/8 | — |
| E | 1755 POST Y-SK | 2/8 | 0/8 | 1/8 | — |
| F | 1767 POST Y-SK | 8/8 | 8/8 | 8/8 | — |
| G | 1770 POST Y-SK | 4/8 | 3/8 | 1/8 | — |
| H | 1771 POST Y-SK | 5/8 | 4/8 | 1/8 | — |
| I | 1772 POST Y-SK | 3/8 | 3/8 | 1/8 | — |
| J | 1773 POST Y-SK | 2/8 | 4/8 | 0/8 | — |
| K | CONTROL | — | 8/8 | 8/8 | 4/8 |

FEB 20 1951

| SPECIMEN | VIRUS | No | 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 | MORTALITY | LD50 |
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| A | | 1 | – | ? | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| LANSING | | 2 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | |
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| POST Y-SK | $10^{-3}$ | 4 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | 0/8 | |
| | | 5 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | |
| C | | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:40 | 4 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| SERUM FROM CYNOMOLGUS #1750 | | 5 | | – | – | – | | – | – | – | – | – | EE | D | | | | | | | | | | | | | | | | | | | | | | | | $10^{-2.6}$ |
| | | 6 | | – | – | – | | – | – | – | – | – | – | | | – | ? | W | PP | E D | | | | | | | | | | | | | | | | | | | NI |
| | | 7 | | – | – | – | | – | – | – | – | – | – | | | – | – | eb | PP | E D | | | | | | | | | | | | | | | | | | | 11 |
| | | 8 | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | 25 |
| + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LANSING | | 2 | – | – | ? | ? | | – | – | – | P P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | | – | – | – | – | E D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POST Y-SK | 1:200 | 4 | – | – | – | – | | – | – | – | – | – | | | – | – | ? | WW | D | | | | | | | | | | | | | | | | | | | 5/8 | |
| | | 5 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | | | P | D | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | | |

FEB 20 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C (CONT.) SERUM FROM CYNOMOLGUS #1750 + LANSING POST Y-SK | $10^{-3}$ | 1 | – | – | P | PP | | D | | | | | | | | | D | | | | | | | | | | | | | | | | | | | | | 3/7 | |
| | | 2 | – | – | – | – | | – | – | – | – | – | | | – | – | P | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | | – | – | – | – | – | | | – | – | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | ? | ? | TY | TY | TY | D | TY | PHOID | | | | | | | | | | |
| | | 5 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | ? | ? | – | – | | – | – | | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| D SERUM FROM CYNOMOLGUS # 1754 + LANSING POST Y-SK | 1:40 | 1 | – | – | – | ? | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2/8 | $10^{-1.4}$ N.I. = 400 |
| | | 2 | – | – | – | – | | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 4 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 5 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | 1:200 | 1 | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | | – | – | ? | ? | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 3 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 4 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 5 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | $10^{-3}$ | 1 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 2 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 3 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 4 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 5 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | – | – | | | |

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| E | | 1 | —P | P | P | | | INJ. P | INJ P | INJ P | INJ P | INJ P | INJ P | | INJ P | INJ P | INJ P | INJ P | INJ P | ? | | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | $10^{-1.4}$ |
| | | 2 | — | — | — | PP | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | ? CNS | | ? CNS | ? | ? | — | — | — | | — | — | — | D | | | | | | | |
| | 1:40 | 4 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | 2/8 | N.I. |
| | | 5 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | | 4 |
| SERUM FROM CYNOMOLGUS # 1755 | | 6 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | | 400 |
| | | 7 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 8 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| + | | 1 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 2 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 3 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| LANSING | 1:200 | 4 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | 9/8 |
| | | 5 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 6 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| POST Y-SK | | 7 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 8 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 1 | ? | ? | ? | — | | — CNS | CNS | CNS | CNS | EE CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 3 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | $10^{-3}$ | 4 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | 1/8 |
| | | 5 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 6 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 7 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| | | 8 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | — | — | — | |
| F | | 1 | — | PP | PR WP | D PP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | — | — | — | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | — | — | — | | — P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1767 | 1:40 | 4 | — | — | — | — | | — | — | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | N.I. |
| | | 5 | — | — | — | — | | — | — | — | E? | P E EE | D | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| + | | 6 | — | — | — | — | | — | — | — | — | EE | PP EE | | D | | | | | | | | | | | | | | | | | | | | | | | | | 3. |
| LANSING | | 7 | — | — | — | — | | — | — | — | — | — | — | | — | EE | P E | D | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | — | — | — | — | | — | — | — | — | — | — | | — | E | | D | | | | | | | | | | | | | | | | | | | | | |
| POST Y-SK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

FEB 20 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|
| F (CONT.) SERUM FROM CYNOMOLGUS #1767 + LANSING POST Y-5K | 1:200 | 1 | — PP D | 8/8 | $10^{-3.5}$ |
| | | 2 | — ? P D | | |
| | | 3 | — — 2 PP D | | |
| | | 4 | — — — PP D | | |
| | | 5 | — — — — — ? D | | |
| | | 6 | — — — — — — — — — EPE D | | |
| | | 7 | — — — — — — — — — — — — P E D | | |
| | | 8 | — — — — — — — — — — — —

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G (CONT.) SERUM FROM CYNOMOLGUS # 1770 + LANSING POST Y-SK | $10^{-3}$ | 1 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | P | D | | | | | | | | | | | | 1/8 | |
| | | 2 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 3 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 4 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 5 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| H SERUM FROM CYNOMOLGUS # 1771 + LANSING POST Y-SK | 1:40 | 1 | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 | $10^{-1.9}$ |
| | | 2 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | N.I. |
| | | 3 | – | – | – | – | | – | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | 4 | – | – | – | – | | – | – | – | – | – | | | – | – | – | D | | | | | | | | | | | | | | | | | | | | | 130 |
| | | 5 | – | – | | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | PPP E | E | | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | | |
| | | 1 | – | – | (NS | (NS | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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FEB 20 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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FEB 20 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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SUMMARY OF TEST OF FEBRUARY 21, 1951

TEST FOR NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS # 1748 | POST Y-SK | 0/8 | 1/8 | 4/7 | — | 1.3 | 200 (800) |
| CYNOMOLGUS # 1749 | POST Y-SK | 8/8 | 8/8 | 6/8 | — | 3.3 | 2 |
| CYNOMOLGUS # 1753 | POST Y-SK | 5/8 | 2/8 | 4/8 | — | 2.1 | 32 (80) |
| CYNOMOLGUS # 1756 | POST Y-SK | 6/8 | 4/8 | 0/8 | — | 1.9 | 50 200 |
| CYNOMOLGUS # 1762 | POST Y-SK | 7/7 | 6/8 | 2/8 | — | 2.6 | 10 40 |
| CYNOMOLGUS # 1765 | POST Y-SK | 5/8 | 0/8 | 0/8 | — | 1.7 | 80 320 |
| CYNOMOLGUS # 1768 | POST Y-SK | 7/8 | 8/8 | 3/8 | — | 2.8 | 6 25 |
| CYNOMOLGUS # 1774 | POST Y-SK | 2/8 | 0/8 | 0/8 | — | 1.3 | 200 |
| CONTROL | | — | 8/8 | 7/8 | 2/8 | 3.6 | |
| | | | | | Cum. | 4.2 | |

FEB 21 1951

# TEST FOR NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

PURPOSE: To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus.

VIRUS: Lansing virus: Pool VI of 2/15/51. 10% suspension in saline. Centrifuged 2000 rpm for 10 minutes.

PROCEDURE: 0.2 ml of undiluted post Y-SK serum was added to 1.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:160, 1:500, giving final dilutions of virus 1:40, 1:200, 1:800. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made at saline. The mixtures were shaken and incubated at room temperature for 1 hr. Inoculation time the tubes were in an ice bath.

MICE: 18-20 gm. Maxfield albino 8 per dilution

| CODE | CYNOMOLGUS # | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | 1748 POST Y-SK | 0/8 | 1/8 | 1/7 | — |
| B | 1749 POST Y-SK | 8/8 | 8/8 | 6/8 | — |
| C | 1753 POST Y-SK | 5/8 | 2/8 | 4/8 | — |
| D | 1756 POST Y-SK | 6/8 | 1/8 | 0/8 | — |
| E | 1762 POST Y-SK | 7/7 | 6/8 | 2/8 | — |
| F | 1765 POST Y-SK | 5/8 | 0/8 | 0/8 | — |
| G | 1768 POST Y-SK | 7/8 | 8/8 | 3/8 | — |
| H | 1774 POST Y-SK | 2/8 | 0/8 | 0/8 | — |
| I | CONTROL | — | 8/8 | 7/8 | 2/8 |

FEB 21 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SERUM FROM CYNOMOLGUS #1749 | 1:40 | 4 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | N.I. |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SERUM FROM CYNOMOLGUS #1762 | | 6 | – | – | – | | PP PP | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 |
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FEB 21 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SERUM FROM CYNOMOLGUS #1768 | | 5 | – | – | – | | – | – | – | – | – | – | | EE | P EE | D | | | | | | | | | | | | | | | | | | | | | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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STANDARD B & P "NOTEAR"

FEB 21 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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# SUMMARY OF TEST OF FEBRUARY 23, 1951

## TEST FOR NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| CYNOMOLGUS # 1775 | POST Y-SK | 5/8 | 3/8 | 2/8 | — | 2.1 | 40<br>125 |
| CYNOMOLGUS # 1777 | POST Y-SK | 6/7 | 5/8 | 5/8 | — | 2.8 | 8<br>25 |
| CYNOMOLGUS # 1778 | POST Y-SK | 7/8 | 5/8 | 6/8 | — | 3.0 | 5<br>16 |
| CYNOMOLGUS # 1779 | POST Y-SK | 5/7 | 6/8 | 6/8 | — | 3.0 | 5<br>16 |
| CYNOMOLGUS # 1780 | POST Y-SK | 6/8 | 6/8 | 4/7 | — | 2.7 | 10<br>32 |
| CYNOMOLGUS # 1781 | POST Y-SK | 5/8 | 7/8 | 6/8 | — | 3.0 | 5 |
| CYNOMOLGUS # 1782 | POST Y-SK | 6/7 | 5/8 | 4/8 | — | 2.6 | 13<br>40 |
| CYNOMOLGUS # 1783 | POST Y-SK | 6/8 | 7/8 | 4/8 | — | 2.8 | 8 |
| CONTROL | | — | 8/8 | 8/8 | 2/8 | 3.7 | |
| | | | | | | 4.2 | |

FEB 23 1951

# TEST FOR NEUTRALIZING ANTIBODIES FOR LANSING VIRUS AMONG DIFFERENT GROUPS OF CYNOMOLGUS MONKEYS GIVEN Y-SK BY MOUTH

PURPOSE: To determine if these animals which were given Y-SK virus orally have developed neutralizing antibodies for Lansing virus.

VIRUS: Lansing virus: Pool VII of 2/5/51. 10% suspension in saline. Centrifuged 2000 rpm for 10 minutes.

PROCEDURE: 0.2 ml of undiluted post Y-SK serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500, giving final dilutions of virus 1:40, 1:200, 1:1000. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixtures were shaken and incubated at room temperature for 1 hr. During incubation time the tubes were in an ice bath.

MICE: 18-20 gm. Mayfield albino 8 per dilution

| CODE | CYNOMOLGUS # | | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|---|
| A | 1775 | POST Y-SK | 5/8 | 3/8 | 2/8 | — |
| B | 1777 | POST Y-SK | 6/7 | 5/8 | 5/8 | — |
| C | 1778 | POST Y-SK | 7/8 | 5/8 | 6/8 | — |
| D | 1779 | POST Y-SK | 5/7 | 6/8 | 6/8 | — |
| E | 1780 | POST Y-SK | 6/8 | 6/8 | 4/7 | — |
| F | 1781 | POST Y-SK | 5/8 | 7/8 | 6/8 | — |
| G | 1782 | POST Y-SK | 6/7 | 5/8 | 4/8 | — |
| H | 1783 | POST Y-SK | 6/8 | 7/8 | 4/8 | — |
| I | CONTROL | | — | 8/8 | 8/8 | 2/8 |

FEB 23 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| A | | 1 | – | | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | CNS | PP CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:40 | 4 | – | | CNS | CNS | PP CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | | – | – | ? | ? | – | – | | PP | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1775 | | 6 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | 5/8 | 10$^{-2.1}$ N.I. " 40 |
| | | 7 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | |
| | | 8 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | |
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| | 1:200 | 4 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | ? TY | ? TY | | ? | ? | – | – | TY | TY | | | TY | TY | TY | TY | TY | 3/8 | |
| LANSING | | 5 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | |
| | | 6 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | |
| | | 7 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | |
| POST Y-5K | | 8 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | | – | – | – | – | – | | |
| | | 1 | EE | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | : | | PR | PR | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10$^{-3}$ | 3 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | |
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| B | | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1777 | | 3 | – | | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:40 | 4 | – | | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/7 | 10$^{-2.8}$ N.I. " 8 |
| + | | 5 | – | | – | – | – | – | – | – | | – | – | TY | TY | TY | TY | | TY | TY | TY | TY | TY | TY | | TY | ? TY | ? TY | ? TY | ? TY | TY | | | TY | TY | TY | TY | TY | | |
| LANSING | | 6 | – | | – | – | – | – | – | – | | – | – | – | – | E | E P | | D | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | P | D | | | | | | | | | | | | | | | |
| POST Y-5K | | 8 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | D | | | | | | |

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| B (CONT.) | | 1 | – | | D | – | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 3 | – | | – | – | – | – | – | | | 4h | P EE | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1777 + LANSING POST Y-SK | 1:200 | 4 | – | | – | – | – | – | – | | | – | – | – | EE | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | D | | | | | | | | | | | 5/8 | |
| | | 6 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | |
| | | 7 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | |
| | | 8 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | |
| | | 1 | – | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | | P | | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | – | – | – | – | – | | | – | – | – | – | – | P | | D | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 4 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | PP | PP | PP | PP | D | | | | | | | | | | | | | 5/8 | |
| | | 5 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | P | PP | D | | | | | | | | | | | | |
| | | 6 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | ? | – | – | – | | – | – | – | – | – | | | |
| | | 7 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | |
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| C | | 1 | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | | PW | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1778 + LANSING POST Y-SK | 1:40 | 4 | – | | – | – | – | – | EE | EE | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | $10^{-3.0}$ N.I. 4 5 |
| | | 5 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | PP PP E | D D | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 1 | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | – | – | – | – | – | | | – | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:200 | 4 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | D | | | | | | | | | | | | | 5/8 | |
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| | | 7 | – | | – | – | – | – | – | | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| C (CONT.) SERUM FROM CYNOMOLGUS #1778 + LANSING POST Y-SK | $10^{-3}$ | 1 | – | – | – | PP EE D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | |
| | | 2 | – | – | – | PP CP D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | CNS | EE CNS | EE CNS | EE CNS | | D | | | | | | | | | | | P | D | | | P D | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P D | | | | | | | | | | | | |
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| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| D SERUM FROM CYNOMOLGUS #1779 + LANSING POST Y-SK | 1:40 | 1 | Ⓓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-3.0}$ N.I. = 5 |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | | | | ? WW | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | | | | – | – | ? P EE P EE D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | | | | – | – | – | – | – | – | – | – | – | – | P E | P E | P E | D | | | | | | | | | | | | | |
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| | 1:200 | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | $10^{-3}$ | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | E | EEE D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | ? | – | – | | | P P | PP | PR D | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 6 | – | – | – | – | – | – | – | | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | ? | E EE AP | | D | | | | | | | |
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| SPECIMEN | VIRUS | No. | 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 | MORTALITY | WD50 |
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| E | | 1 | — | | PP CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 3 | — | | ? | ? | P CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:40 | 4 | — | | — | — | — | — | — | — | | — | — | — | P | PP | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | | — | — | — | — | — | — | | — | — | — | — | P | D | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM | | 6 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | ? | E | E | | D | | | | | | | | | | | | | |
| CYNOMOLGUS | | 7 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |
| # 1780 | | 8 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |
| | | 1 | — | | PR | PR | PR | PR | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| + | | 2 | — | | PP | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | — | | — | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:200 | 4 | — | | — | — | — | — | — | — | | — | — | — | — | D | | | | | | | | | | | | | | | | | | | | | | | |
| LANSING | | 5 | — | | — | — | — | — | — | — | | — | — | — | — | E? | E? | | D | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | Eh | PP EE | D | | | | | | | | | | | | | | | | | | |
| | | 7 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |
| POST Y-SK | | 8 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |
| | | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | ? | | PR | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | ? | | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 4 | — | | — | — | — | — | — | ? TY | | ? | ? | — | — | — | — | | D | | | | | | | | | | | | | | | | | | | | |
| | | 5 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | D | | | | | | | | | | | | | | | | | | | | |
| | | 6 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |
| | | 7 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |
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| F | | 1 | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | — | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM | | 3 | — | | — | — | — | — | — | PP | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYNOMOLGUS # 1781 | 1:40 | 4 | — | | — | — | — | — | — | — | | w | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| + | | 5 | — | | — | — | — | — | — | — | | — | — | ? | D | | | | | | | | | | | | | | | | | | | | | | | | |
| LANSING | | 6 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |
| | | 7 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |
| POST Y-SK | | 8 | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | | |

6/8

$10^{-2.7}$ N.I. = 10

6/8

4/7

5/8

$10^{-3.0}$ N.I. = 5

STANDARD B & P "NoTEAR"

FEB 23 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| F (CONT.) | | 1 | – | | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | | E | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | ? | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:200 | 4 | – | | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1781 | | 5 | – | | – | – | – | – | – | – | | | | | | | ? | W | D | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 6 | – | | – | – | – | – | – | – | | | | | | | – | – | E | D | | | | | | | | | | | | | | | | | | | |
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| | | 1 | – | | P | PP PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LANSING | | 2 | – | | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POST Y-SK | 10-3 | 4 | – | | – | – | – | – | – | – | | | | | | | – | – | – | P | D | | | | | | | | | | | | | | | | 6/8 | |
| | | 5 | – | | – | – | – | – | – | – | | | | | | | – | – | – | – | P | PP | D | | | | | | | | | | | | | | | |
| | | 6 | – | | – | – | – | – | – | – | | | | | | | – | – | – | – | – | – | – | : | | PP | D | | | | | | | | | | | |
| | | 7 | – | | – | – | – | – | – | – | | | | | | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
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| G | | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-2.6}$ |
| | | 2 | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | N.I. |
| | | 3 | – | | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | " |
| | 1:40 | 4 | – | | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS #1782 | | 5 | – | | CNS | PP W P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/7 | 13 |
| | | 6 | – | | – | P | PP P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | | – | – | – | – | – | – | | | | | | | ? | ? | – | – | PP | D | | | | | | | | | | | | | | | | | |
| | | 8 | – | | – | – | – | – | – | – | | | | | | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
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| | | 1 | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LANSING | | 2 | – | | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | – | – | PP PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POST Y-SK | 1:200 | 4 | – | | – | – | P | PP EE | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5/8 | |
| | | 5 | – | | – | – | – | – | – | – | | | | | | | – | – | – | EE P | D | | | | | | | | | | | | | | | | | |
| | | 6 | – | | – | – | – | – | – | – | | | | | | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| G (CONT.) SERUM FROM CYNOMOLGUS #1782 + LANSING POST Y-SK | $10^{-3}$ | 1 | – | | P | D | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 4 | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P E | P E D | | | | | | | | | | | | | | | | | | |
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| H SERUM FROM CYNOMOLGUS #1783 + LANSING POST Y-SK | 1:40 | 1 | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-2.8}$ N.I. 11 8 |
| | | 2 | – | | – | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | | – | – | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | | – | – | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | |
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| | | 2 | – | | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | | – | – | W W | P P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | | – | – | – | – | – | – | – | – | – | W | D | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 6 | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | P E | PR P | D P | | | | | | | | | | | | | | | | 7/8 | |
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FEB 23 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| SALINE | | 4 | – | | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| LANSING | 10-3 | 8 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | PE | D | | | | | | | | | | | | | | | | | 8/8 | |
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| | 10-4 | 4 | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | 2/8 | |
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SUMMARY OF TEST MARCH 19, 1951

TEST FOR PRESENCE OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS FROM NORMAL CYNOMOLGUS MONKEYS

| CYNOMOLGUS # | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 3.0 | 4.0 | | |
| 1600 X Prev NI = 0/80 | NORMAL | 5/8 | 1/7 | 2/7 | 0/8 | 1.9 | |
| 1572 Prev. NI = 8 of 40 | NORMAL | 8/8 | 7/8 | 4/8 | 0/7 | 2.9 | |
| 1579 Prev. NI = 8 of 40 | NORMAL | 7/7 | 7/8 | 7/8 | 5/8 | 4.0 | |
| CONTROL | | — | 7/8 | 7/8 | 4/8 | 3.8 | |

4.2

MAR 19 1951

# TEST FOR PRESENCE OF NEUTRALIZING ANTIBODIES FOR LANSING VIRUS FROM NORMAL CYNOMOLGUS MONKEYS

PURPOSE: These normal sera on previous tests appeared to contain a substance which neutralized Lansing virus. The tests are being repeated to determine if these findings were due to chance or if the sera really contained neutralizing substance.

VIRUS: Lansing virus: Pool VII of 2/5/51. 10% suspension in saline. Centrifuged at 2000 rpm for 10 minutes to remove flocculant ppt.

PROCEDURE: 0.2 ml of undiluted normal serum was added to 0.2 ml of each of the following dilutions of Lansing virus in saline: 1:20, 1:100, 1:500, 1:5,000.; giving final dilutions of virus of 1:40, 1:200, $10^{-3}$, $10^{-4}$. Virus controls consisted of 1:200, $10^{-3}$, $10^{-4}$ dilutions made in saline. The mixtures were shaken and incubated at room temperature for 1 hour. Tubes were placed in an ice bath during inoculation.

MICE: 18-20 gm Manfield ♀ 8 per dilution

| CODE | CYNOMOLGUS # | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ |
|---|---|---|---|---|---|
| A | NORMAL 1600X | 5/8 | 1/7 | 2/7 | 0/8 |
| B | NORMAL 1572 | 8/8 | 7/8 | 4/8 | 0/7 |
| C | NORMAL 1579 | 7/7 | 7/8 | 7/8 | 5/8 |
| D | CONTROL | — | 7/8 | 7/8 | 4/8 |

MAR 19 1957

SPECIMEN

A

SERUM FROM CYNOMOLGUS

#/600X

+

LANSING

NORMAL

PREVIOUS TEST
1:40 - 5/8
1:200 - 2/8
$10^{-3}$ - 1/8

| VIRUS | NO | 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 | MORTALITY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | – | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1:40 | 4 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | PP | D | | | | | | | | | | | | | | | | | | | 5/8 |
| | 5 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | | – | – | – | ? | PP | D | | | |
| | 6 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | – | – | – | – | – | | – | – | – | – | – | – | – | | |
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| $10^{-3}$ | 5 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | | |
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| $10^{-4}$ | 4 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | | |
| | 5 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | | |
| | 6 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | | |
| | 7 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | | |
| | 8 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | | |

LD50
$10^{-1.9}$
N.I.
4
80

SPECIMEN: B

SERUM FROM CYNOMOLGUS #1572 + LANSING NORMAL

PREVIOUS TEST
1:40 - 5/8
1:200 - 5/8
$10^{-3}$ - 2/8

| VIRUS | NO. | 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 | MORTALITY | LD50 |
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| | 1 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-2}$ 9 |
| | 2 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | N.I. |
| | 3 | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | " |
| 1:40 | 4 | – | – | – | ? | ? | | ? | ? CNS | ? CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| | 5 | – | – | – | – | – | | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | E | E | PP EE | | D | | | | | | | | | | | | | | | 8/8 | |
| | 7 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | ? | P | PP EE | D | | | | | | | | | | | | |
| | 8 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | WW E | P | E | PP EE | PP EE | PP EE | D | | | | | | | |
| | 1 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | – | – | – | – | – | | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1:200 | 4 | – | – | – | – | – | | – | – | – | – | – | PP | | D | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | E | D | | | | | | | | | | | | | | | | | | | 7/8 | |
| | 6 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | E | E | PP EE | D | | | | | | | | | | | | | | | | |
| | 7 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | P | P | D | | | | |
| | 8 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | | |
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| | 3 | – | – | – | – | – | | CNS | CNS | CNS | CNS | CNS | PP CNS | | D | | | | | | | | | | | | | | | | | | | | | | | |
| $10^{-3}$ | 4 | – | – | – | – | – | | – | – | – | – | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | 4/8 | |
| | 6 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | | |
| | 7 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | | |
| | 8 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | | |
| | 1 | ? | S | S | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | – | – | – | – | – | | ? | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | | |
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| $10^{-4}$ | 4 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | 0/7 | |
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| | 7 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | | |
| | 8 | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | | | | |

MAR 1 9 1951

| SPECIMEN | VIRUS | No. | 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 | MORTALITY | LD50 |
|---|---|---|---|---|---|
| C<br>SERUM FROM CYNOMOLGUS #1579 + LANSING | 1:40 | 1 | — D | 7/7 | $10^{-4.0}$ N.D. 4 −2 |
| | | 2 | — D | | |
| | | 3 | — PP PR D | | |
| | | 4 | — PP D | | |
| | | 5 | — — — — — — — EP PR D | | |
| | | 6 | — — — — — — — — — S (D) P D | | |
| | | 7 | — — — — — — — — — — — — P D | | |
| | | 8 | — — — — — — — — — — — — — — — — — — — ? EE PP EE D | | |
| | 1:200 | 1 | — D | 7/8 | |
| | | 2 | — D | | |
| | | 3 | — CNS D | | |
| | | 4 | — — — D | | |
| | | 5 | — — — PP D | | |
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| | | 7 | — — — — — — — — — — D | | |
| | | 8 | — — — — — — — — — — — — — — — — — — — ? ? ? — — — — — — | | |
| NORMAL | | 1 | — P D | 7/8 | |
| | | 2 | — — — P D | | |
| | | 3 | — — — ? D | | |
| | $10^{-3}$ | 4 | — — — — — D | | |
| | | 5 | — — — — — — — — — — — — P P D | | |
| | | 6 | — — — — — — — — — — — — — — — W PP P D | | |
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| | $10^{-4}$ | 1 | — — — — PP D | 5/8 | |
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| | | 6 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — | | |
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| | | 8 | — — — — — — — — — — — — — — — — — — — — — — — — — — — — | | |

PREVIOUS TEST
1:40 - 5/7
1:200 - 5/8
$10^{-3}$ - 3/7

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| D | | 1 | ⓓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:200 | 4 | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | E | | D | | | | | | | | | | | | | | | | | | | | | | | |
| CONTROL | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | | – | 3 | D | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | P | P | D | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | | | | | | | | | | |
| SALINE | | 1 | – | – | W | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| + | | 3 | – | – | – | – | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 4 | – | – | – | – | – | – | – | – | – | – | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| LANSING | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | P E | P E | D | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | E E | P E | D | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | | | | | | | | | | | |
| | | 1 | – | – | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | P | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | ? | | ? | – | – | – | – | ? | | D | | | | | | | | | | | | | | | | |
| | $10^{-4}$ | 4 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | ? | – | | D | | | | | | | | | 4/8 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | | | |

$LD_{50}$: $10^{-3.8}$

STANDARD B & P "NoTEAR"

SUMMARY OF TEST OF MAY 22, 1951

QUALITATIVE TEST FOR NEUTRALIZATION OF LANSING VIRUS BY "NORMAL" CYNOMOLGUS MONKEY SERA

| DONOR | SERUM | MORTALITY AT INDICATED FINAL DILUTION OF VIRUS | | | | | | $LD_{50}$ | NEUTRALIZING INDEX |
|---|---|---|---|---|---|---|---|---|---|
| | | 1.6 | 2.3 | 2.48 | 3.0 | 4.0 | 5.0 | | |
| CYNOMOLGUS #1606 | NORMAL | 7/8 | 8/8 | — | 3/8 | 0/8 | — | 2.8 | 25 |
| CYNOMOLGUS #1626 | NORMAL | 7/7 | 8/8 | — | 6/8 | — | — | 3.3 | 8 |
| CONTROL | | — | — | 9/9 | 10/10 | 6/10 | 0/10 | 4.2 | |

Note: In test of 1-10-51, Cyn 1606 yielded $LD_{50}$ of 2.4 on simultaneous control of 4.3 or an index of 80

In test of 12-29-50 Cyn. 1626 yielded $LD_{50}$ of 2.6 on simultaneous control of 4.1 or an index of 32

Note — ~~B~~. Cyn 1626 developed fatal paralytic poliomyelitis after feeding of Y-5k virus on 12/3/50 and developed neutr. antibody at time of death with index of 160 +

Cyn 1606 in same experiment did not develop polio, but antibodies with index of 630 +

MAY 22 1951

# QUALITATIVE TEST FOR NEUTRALIZATION OF LANSING VIRUS BY NORMAL CYNOMOLOGUS MONKEY SERA

PURPOSE: Of these normal sera on previous tests (see tests of 1/16/51, 12/29/50) one (#1606) was positive against Lansing virus and the results of the other (#1626) were doubtful. The tests are being repeated to determine if the results obtained previously were correct.

VIRUS: Lansing virus: Pool VII of 2/15/51. 10% suspension in saline. Centrifuged 10 minutes at 2000 rpm to remove flocculant ppt.

PROCEDURE: Dilutions of Lansing virus of: 1:20, 1:100, 1:500 and 1:5,000 were made up and 0.2 ml. of each were distributed in tubes. 0.2 ml of undiluted normal serum were added to these virus dilutions so that the final dilutions of virus were: 1:40, 1:200, $10^{-3}$, $10^{-4}$. The virus controls consisted of Lansing virus in saline; final concentrations of 1:300, $10^{-3}$, $10^{-4}$ $10^{-5}$. The mixtures were shaken and incubated at room temperature for one hour. Tubes remained in an ice bath during inoculation.

MICE: 18-20 gram Maxfield albino 8 per dilution
controls 10 per dilution

| CODE | SPECIMEN | 1:40 | 1:200 | $10^{-3}$ | $10^{-4}$ | $10^{-5}$ |
|---|---|---|---|---|---|---|
| A | SERUM FROM CYNOMOLGUS #1606 "NORMAL" | 7/8 | 8/8 | 2/8 | 0/8 | — |
| B | SERUM FROM CYNOMOLGUS #1626 "NORMAL" | 7/7 | 8/8 | 6/8 | — | — |
| | | | 1:300 | | | |
| C | CONTROL | — | — | 9/9 | 1/10 | 6/10 | 0/10 |

MAY 2 2 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | 1 | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | | – | – | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:40 | 4 | – | – | – | – | | – | – | – | – | – | – | | PEE | PEE | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | | – | – | – | – | – | – | | – | EE | D | | | | | | | | | | | | | | | | | | | | | | |
| SERUM FROM CYNOMOLGUS # 1606 | | 6 | – | – | – | – | | – | – | – | – | – | – | | – | ? | PP | D | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | – | | – | – | PE | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 7/8 | 25 |
| | | 1 | – | – | – | – | | – | E | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NORMAL | | 2 | – | – | – | – | | – | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | | – | – | – | – | P | PP | | D | WPP | | | | | | | | | | | | | | | | | | | | | | | |
| + | 1:200 | 4 | – | – | – | – | | – | – | – | – | – | – | | – | – | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | P | PP | PP | P | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | P | P | D | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | EE | EE | D | | | | | | | | | |
| LANSING | | 8 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | | – | – | ? | EE | D | | | | | | 8/8 | |
| | | 1 | – | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 6 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
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| | $10^{-4}$ | 4 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 0/8 |
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| | | 6 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 8 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |

| SPECIMEN | ~~SERUM~~ VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| B<br><br>SERUM FROM CYNOMOLGUS #1626<br><br>NORMAL<br><br>+<br><br>LANSING | 1:40 | 1 | Ⓓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/7 | $10^{-3.3}$<br>N.I.<br>"<br>8 |
| | | 2 | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | | P P P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | | P P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | | P | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | | – | – | – | ? | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | | – | – | – | – | P | P P E E | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 7 | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | P | | D | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | – | – | W W | D | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | P | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | | P P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 6 | – | – | – | – | | – | – | – | – | P P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | $10^{-4}$ | 1 | – | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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MAY 2 2 1951

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| C | | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-4.2}$ |
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| | | 4 | – | – | – | P | | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1:300 | 5 | – | – | – | ? | | ? | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONTROL | | 6 | – | – | – | – | | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SALINE | | 9 | – | – | – | – | | – | – | – | – | E | P | P | E | D | | | | | | | | | | | | | | | | | | | | | | | 9/9 |
| | | 10 | – | – | – | – | | – | – | – | – | – | – | | – | | P | D | | | | | | | | | | | | | | | | | | | | | |
| + | | 1 | – | – | – | – | | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| LANSING | | 3 | – | – | – | – | | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | | – | – | – | – | – | P | | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 5 | – | – | – | – | | – | – | – | – | – | – | | D | | | | | | | | | | | | | | | | | | | | | | | 10/10 |
| | | 6 | – | – | – | – | | – | – | – | – | – | – | | EE | P | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | | – | – | – | – | – | – | | – | E | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | EE | D | | | | | | | | | | | | | | | | | | | | |
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| | | 10 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | = | | – | – | – | – | – | – | P | P | D | | | | | | | | | |
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| | | 3 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | ? | D | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | I | E | E | D | | | | | | | | | | | | | | | | |
| | $10^{-4}$ | 5 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | | D | | | | | | | | | | | | | | | | 9/10 |
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| | | 7 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | LD50 |
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| C (CONT.) | | 1 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | | |
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| CONTROL | | 4 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | | |
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| SALINE | | 6 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | | |
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| LANSING | | 9 | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | – | – | – | – | | – | – | | |
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SUMMARY OF TEST OF MAY 22, 1951

QUANTITATIVE TEST FOR LANSING NEUTRALIZING SUBSTANCES IN SERUM OF A CYNOMOLGUS MONKEY WHICH HAD LANSING ANTIBODY BEFORE INFECTION AND YET DEVELOPED PARALYSIS

| SERUM FROM | SPECIMEN TAKEN | MORTALITY AT INDICATED FINAL DILUTION OF | | US. 50 LD50 (49 LD50) | | 50% PROTECTIVE ENDPOINT |
|---|---|---|---|---|---|---|
| | | 1:2 | 1:8 | 1:32 | 1:128 | |
| CYNOMOLYGUS #1600X | BEFORE INFECTION | 1/8 | 5/8 | 8/8 | 7/7 | 1:5 |
| | POST Y-SK | 0/8 | 0/8 | 1/8 | 2/8 | 1:181+ |

| | 1:300 | $10^{-3}$ | $10^{-4}$ | $10^{-5}$ | TITER |
|---|---|---|---|---|---|
| CONTROLS | 9/9 | 10/10 | 6/10 | 0/10 | 4.2 |

MAY 22 1951

# QUANTITATIVE TEST FOR LANSING NEUTRALIZING SUBSTANCES IN SERUM OF CYNOMOLGUS MONKEYS ~~GIVEN Y-5K BY MOUTH~~ which had Lansing Antibody before Infection + 4 yr Developed Paralysis

**PURPOSE:** To determine the titer of activity of the antiviral factor against 50 $LD_{50}$ (1:300) of Lansing virus. These normal and post-Y-5K sera were done previously (see tests 4/10/51, 3/19/51) and both were found to be positive against Lansing virus.

**VIRUS:** Lansing virus: Pool III of 2/5/51. 10% suspension in saline. Centrifuged at 2000 rpm to remove flocculant ppt.

**PROCEDURE:** The sera were serially diluted as follows: undiluted, 1:4, 1:16 0:64. To 0.5 ml. of each dilution 0.5 ml of a 1:750 dilution of Lansing virus was added so that the final concentration of virus was 1:300 (50 $LD_{50}$) and the final dilutions of sera were 1:2, 1:8, 1:32 and 1:128. The tubes were shaken and placed at room temperature for 1 hour. Tubes were placed in an ice bath during inoculation.

**MICE:** 18-20 gram Mayfield albino 8 per dilution
controls 10 per dilution

| CODE | SPECIMEN | 1:2 | 1:8 | 1:32 | 1:128 |
|---|---|---|---|---|---|
| A | SERUM FROM CYNOMOLGUS #1600X BEFORE INFECTION | 4/8 | 5/8 | 8/8 | 7/7 |
| B | SERUM FROM CYNOMOLGUS #1600X POST Y-5K | 0/8 | 0/8 | 1/8 | 2/8 |
| | | 1:300 | $10^{-3}$ | $10^{-4}$ | $10^{-5}$ |
| C | CONTROL | 9/9 | 10/10 | 6/10 | 0/10 |

MAY 22 1951

| SPECIMEN | SERUM | NO. | 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 | MORTALITY | LD50 |
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| A | | 1 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | P | | D | | | | | | | | | | |
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| | | 3 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | | 1:5 |
| | 1:2 | 4 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | 1/8 | |
| | | 5 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | | |
| SERUM FROM CYNOMOLGUS #1600X | | 6 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | | |
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| NORMAL Before Infection | | 1 | — | — | — | P | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 6 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | | |
| LANSING 1:300 | | 7 | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | — | — | — | — | | — | — | | |
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| (49 LD50) | | 1 | — | — | — | — | | ? | — | — | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
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B

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STANDARD B & P "NoTEAR"
STANDARD B & P "NoTEAR"

MAY 22, 1950

| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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| SPECIMEN | VIRUS | NO. | 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 | MORTALITY | $LD_{50}$ |
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# Neutralization tests with sera of Cynomolgus Monkeys.

SEP 18 1951

**Purpose** - To determine Lansing antibody content of Cynomolgus monkey sera (Monkeys bled fed virus (Y-5K) mixed with human milk - both boiled and unboiled. Incubation of virus in milk of 1 hour at room temperature prior to feeding.

**Virus** - Lansing virus - Pool VI - of 2/5/51 - 10% mouse brain.

**Sera** - Sera from Cynomolgus monkeys 2292 to 2321 obtained at autopsy.

**Mice** - 18-20 grm. Maxfield albino (female).

**Methods** - Each serum against virus dil. of 1:10, 1:50, 1:500 giving final virus dils. of 1:20, $10^{-2}$, $10^{-3}$

Controls - Virus dil of $10^{-2}$, $10^{-3}$ $10^{-4}$

Amts. needed and amts. used for dilutions.

2 cc of 1:10 virus (2 ampules 2000 RPM x 10 MIN)
2.2 cc of 1:50 " { .6 cc of 1/10 + 2.4 cc sal. = 3 cc 1/50
2.2 cc of 1:500 " { .3 cc of 1/50 + 2.7 cc sal = 3 cc 1/500
.2 cc of 1:5000 " { .2 cc of 1/500 + 1.8 cc sal = 2 cc 1/5000

.2 cc sera + .2 cc of virus dil. 1:10, 1:50, 1:500
= final virus dil of 1:20, $10^{-2}$, $10^{-3}$

CYN. MONKEY SERA 2292 - 2301 SEP 18 1951

CYN. MONKEY SERA 2302 - 2311 SEP 19 1951

CYN. MONKEY SERA 2312 - 2321 SEP 20 1951

STANDARD B & P "NOTEAR"

STANDARD B & P "NOTEAR"

SEP 18 1951

# CYN. SERA NEUTRALIZATION TESTS

| SPECIMEN | VIRUS | No | 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 | MORTALITY | LD50 |
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| CYN. MONKEY 2292 UNBOILED MILK + Y-SK VIRUS A | 1:20 | 1 | - | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | 3.5+? |
| | | 2 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | P | P | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | 2 | CNS | P | P | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | P | | | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 2 | - | - | - | 2 | - | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | W | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 5 | - | - | - | - | - | - | - | 2 | CNS | Pn | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | PP | D | | | | | | | | | | | | | | | | | | | | |
| CYN. MONKEY 2293 B UNBOILED MILK + Y-SK VIRUS | 1:20 | 1 | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | 10-3.2 |
| | | 2 | - | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | W | P | W | W | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | P | P | - | - | 2 | CNS | 2 | CNS | 2 | 2 | Pn | P | CNS | P | P | CNS | CNS | D | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | P | CNS | P | P | CNS | D | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | 2 | P | P | CNS | D | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | W | W | CNS | D | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | CNS | 2 | CNS | CNS | Pn | P | Pn | CNS | P | Pn | D | | | | | | | |

# CYN. SERA NEUTRALIZATION TEST

SEP 18 1951

| SPECIMEN | VIRUS | NO | 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 | SURVIVED MORTALITY | LD 50 |
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| CYN MONKEY 2293 UNBOILED MILK + 4-SK | $10^{-2}$ | 1 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 2 | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | 2 | 2 CNS | 2 CNS | 2 CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| B | | 1 | - | - | - | 2 | - | 2 | 2 | - | - | - | - | 2 CNS | 2 CNS | P CNS | D | | | | | | | | | | | | | | | | | | | | | | 10 $^{-3.2}$ |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | 2 CNS | PP CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | PP CNS | D | | | | | | | | | | | | | | | | | | 5/8 | |
| | $10^{-3}$ | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | P CNS | D | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | D | | | | | | | | | | | | | | 6-? | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| CYN. MONKEY 2294 UNBOILED MILK + 4-SK | 1:20 | 1 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | ? | - | - | 2 | 2 | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | CAL-CULATED |
| | | 3 | - | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | ww | PP | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | 2 CNS | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | CNS | P CNS | D | | | | | | | | | | | | | | | | | | | | | | 10 $^{-3.4}$ |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | D | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | PNS | CNS | D | | | | | | | | | | | | |
| C. | | 1 | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | 2 | W | W | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | E | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-2}$ | 4 | - | - | - | - | - | - | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | 4-? |
| | | 5 | - | - | - | - | - | - | - | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | 2 | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |

# CYN SERA – NEUTRALIZATION TEST

SEP 18 1951

| SPECIMEN | V.B.S | No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | LD | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | SURVIVED | LD50 |
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| CYN. MONKEY 2294 UNBOILED MILK + Y-SK C. | $10^{-3}$ | 1 | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| | | 2 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | W | W | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 4 | – | – | – | – | ? | – | – | – | – | – | – | 2 | – | P | P | D | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 CNS | 2 CNS | CNS | CNS | D | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | EE CNS | D | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | EE | CNS | P CNS | D | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | CNS | CNS | 2 CNS | 2 | 2 | 2 | 2 | 2 | 2 | – | – | – | – | | | | | | | |
| CYN. MONKEY 2295 UNBOILED MILK + Y-SK | 1:20 | 1 | – | 2 | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | 2 | 2 | – | 2 | 3 | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | 2 | – | – | – | – | – | – | – | – | PP CNS | PP | D | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | P | D | | | | | | | | | | | | | | | | | | | 6/8 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | CNS | CNS | 2 CNS | 2 | 2 | 2 | 2 | – | – | – | – | P | D | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | – | – | – | – | – | – | – | – | – | P | D | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| D | $10^{-2}$ | 1 | – | – | 2 CNS | 2 CNS | ? | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | 0/8 | $10^{-1.6}$ |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | $10^{-3}$ | 1 | – | – | – | – | 2 CNS | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | 2 | ? | ? | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
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| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | | | |

# CYN. SERA – NEUTRALIZATION TEST

SEP 18 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED | LOSO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CYN. MONKEY 2296 UNBOILED MILK + Y-SK E | 1:20 | 1 | – | 2 | 2 CNS | 2 | – | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| | | 2 | – | – | P | – | – | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | = | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | = | 2 | 2 | 2 | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 6 | – | – | – | – | – | – | – | 2 | – | P | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | CNS | CNS | CNS | CNS | P | P | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | 2 | 2 | CNS | CNS | CNS | CNS | CNS | CNS | 2 | CNS | CNS | CNS | CNS | D | | | | | | | | | | | | | | |
| | $10^{-2}$ | 1 | – | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CALCULATED | |
| | | 2 | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | ? | ? | ? | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | $10^{-3.2}$ |
| | | 5 | – | – | – | – | – | – | – | – | – | CNS | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | 2 | – | 2 | D | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | – | – | 2 CNS | ? | 2 | 2 CNS | 2 | 2 | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | 5/8 | |
| | | 2 | – | – | – | – | – | E | 2 | – | – | – | 2 | P | PP CNS | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | CNS | P | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CNS | 2 | – | – | 2 | 2 | 2 | 2 | CNS | PP | D | | | | | | | 6–? |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | P | P | CNS | D | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
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| CYN. MONKEY 2297 UNBOILED MILK + Y-SK F | 1:20 | 1 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | W | W | 2 | ? | – | – | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | 4/8 | |
| | | 3 | – | – | – | – | – | – | – | – | 2 | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | E | E | E | 2 | 2 | – | – | D | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
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STANDARD B & P "NOTEAR" STANDARD B & P "NOTEAR"

SEP 18 1951

# CYN. SERA - NEUTRALIZATION TESTS

| SPECIMEN | VIRUS | No | 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 | SURVIVED MORTALITY | LD 50 |
|---|---|---|---|---|---|
| CYN MONKEY 2297 UNBOILED MILK + Y-SK F | $10^{-2}$ | 1 | – – – 2 CNS 2 CNS 4 CNS 2 – 2 W W W L L 2 2 2 PP D | 2/8 | $10^{-1.5}$ |
| | | 2 | – – 2 – – – – – – – – – – – – – – 2 – – E F E E P PP D | | |
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| | $10^{-3}$ | 1 | D | 0/7 | 320 |
| | | 2 | – – P 2 2 2 – – 2 2 – – – – – – – – – – – – – – – – – – – – – | | |
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| | | 4 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| CYN MONKEY 2298 UNBOILED MILK + Y-SK G | 1:20 | 1 | – – – – – – – 2 – 2 2 – E D | 5/8 | $10^{-1.6}$ |
| | | 2 | – – – – – – – – – – – – – 2 D | | |
| | | 3 | – – – – – – – – – – – – – W W – – PP D | | |
| | | 4 | – – – – – – – – – – – – – – – – – CNS 2 CNS 2 2 2 – – PP D | | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – 2 D | | |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | $10^{-2}$ | 1 | D | 1/7 | 250 |
| | | 2 | – – P – – – – – – – – – – – PP D | | |
| | | 3 | – – – – – – – – – – – – – 2 2 2 2 2 2 – – – – – – – – – – – | | |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 6 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
| | | 8 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |

# CYN. SERA - NEUTRALIZATION TEST

SEP 18 1951

| SPECIMEN | VIRUS | No | 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 | SERVIVED | LD 50 |
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| CYN. MONKEY 2298 UNBOILED MILK + Y-SK G | $10^{-3}$ | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | P | D | | | | | | | | | MORTALITY 1/8 | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| CYN. MONKEY 2299 UNBOILED MILK + Y-SK H | 1:20 | 1 | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 2 | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | PPS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | PS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | 2w | P2 | D | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-2}$ | 1 | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | $10^{-2.6}$ |
| | | 2 | - | - | P | - | - | 2 | P2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | P | - | - | - | - | - | PPP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | PS | PS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-3}$ | 1 | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3/8 | 25 |
| | | 2 | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | P2 | D | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |

# CYN. SERA – NEUTRALIZATION TEST

SEP 18 1951

| SPECIMEN | VIRUS | NO | 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 | SURVIVED | LD50 |
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| CYN. MONKEY 2300 UNBOILED MILK + Y-SK I | 1:20 | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 5 | – | – | 2 | ? | ? | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | 2 | – | CNS P | CNS P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | CNS 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | CALCULATED | |
| | $10^{-2}$ | 1 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | 2 | PP CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | $10^{-3.3}$ |
| | | 5 | – | – | – | – | – | – | 2 | 2 | 2 | W | W | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | ✓ | – | – | 2 | PP CNS | D | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | – | – | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | 2 | – | – | – | – | – | – | 2P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | PP | PP | PP | P | 2 | D | | | | | | | | | | | | | | | | | | | | 6/8 | 5– |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | – | CNS | P | CNS | D | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 CNS | 2 | 2 | – | – | – | – | – | – | – | – | CNS | PP | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | | | | | |
| CYN. MONKEY 2301 UNBOILED MILK + Y-SK J | 1:20 | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 1/8 | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |

# CYN. SERA- NEUTRALIZATION TEST

SEP 18 1951

| SPECIMEN | VIRUS | No | 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 | ~~SERUM~~ MORTALITY | LD50 |
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| CYN. MONKEY 2301 UNBOILED MILK + 4-5K | $10^{-2}$ | 1 | + | - | (CNS) | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/8 | Calculated $10^{-1}$ |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| J | $10^{-3}$ | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 (CNS) | 2 | - | | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0/8 | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | 1000+ |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| CONTROL LANSING VIRUS + SALINE K | $10^{-2}$ | 1 | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | 2 | 2 | - | 2 (CNS) | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | 2 | (CNS) | (CNS) | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 4 | - | - | - | - | - | - | - | - | 2 | (CNS) | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | (CNS) | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | v | 2 | v | - | - | 2 | v | 2 | - | - | - | - | - | - | - | - | - | | |
| | $10^{-3}$ | 1 | - | - | - | - | - | - | - | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | $10^{-4.0}$ |
| | | 2 | - | - | - | - | - | - | - | - | - | (CNS) | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | 2 | 2 | D | | | | | | | | | | | | | | | | | | | | | | | 5/8 | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | (CNS) | PD | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | 2 | - | - | (CNS) | 2 | v | 2 | 2 | 2 | v | v | v | 2 | 2 | 2 | (CNS) | (CNS) | 2 | 2 | D | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | (CNS) | (CNS) | 2 | 2 | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |

SEP 18 1951

# CYN. SERA- NEUTRALIZATION TEST

| SPECIMEN | VIRUS | NO | 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 | SURVIVED | LD50 |
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| CONTROL | | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ENS | PP | D | | | | | | | | | | | | | | | | | | MORTALITY |
| LANSING | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | - | 2 | PP | D | | | | | | | | | | | | | | |
| + | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | |
| SALINE | $10^{-4}$ | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | P | D | | | | | | | | | 6/8 | |
| UNBOILED | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ENS | D | | | | | | | | |
| MILK | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ENS | D | | | | | | | |
| + | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Y-SK | K | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |

STANDARD B & P "NOTEAR" STANDARD B & P "NOTEAR"

# CYN. SERA — NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED | LD 50 |
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| A CYN. MONKEY 2302 UNBOILED MILK + Y-SK | 1:20 | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| | | 2 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | 2 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | P | PP | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 6 | – | – | – | – | – | – | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | EE | PP | D | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-2}$ | 1 | – | 2 CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | 2 CNS | 2 CNS | 2 CNS | 2 CNS | PP CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | P | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 |
| | | 5 | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | – | CNS | CNS | PP | PP | D | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | PP CNS | D | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 CNS | 2 | EEEE | D | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 CNS | D | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 – |
| | | 2 | – | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | CNS | 2 CNS | 2 | 2 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | CNS | CNS | CNS | CNS | PP | D | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | E | E | E | CNS | D | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | CNS | | |
| B CYN. MONKEY 2303 UNBOILED MILK + Y-SK | 1:20 | 1 | – | – | – | – | 2 | – | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | – | – | – | 2 CNS | CNS | 2 | 2 CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 CNS | CNS | 2 | 2 | 2 | 2 | 2 | – | 2 | – | D | | | | | | | | | | | | 5/8 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | – | – | – | – | – | 2 | 2 CNS | 2 | 2 | 2 | CNS | CNS | D | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |

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# CYN. SERA- NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | NO | 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 | SURVIVED | LOSO |
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| B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| CYN. MONKEY 2303 UNBOILED MILK + Y-SK | $10^{-2}$ | 1 | - | - | - | - | ? | - | 2 | (NS) | D | | | | | | | | | | | | | | | | | | | | | | | | | | | 2/8 | |
| | | 2 | - | - | - | - | - | - | - | - | D | 2 | - | - | - | 2 | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | PP | PP | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | D | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 1 | - | - | - | - | - | - | - | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-3}$ | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
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| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| C | | 1 | - | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | 2 (NS) | 2 (NS) | 2 | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYN. MONKEY 2304 UNBOILED MILK + Y-SK | | 3 | - | 2 | - | - | - | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | 1:20 | 4 | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | (NS)(NS) | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | (NS)(NS)(NS) | 2 | (NS) | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | 2 | - | - | - | - | 2 | (NS)(NS)(NS) | P | D | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | $10^{-2}$ | 4 | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | W | - | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 7 | - | - | - | - | - | (NS) | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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# CYN. SERA – NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | No | 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 | ~~SURVIVED~~ MORTALITY | LD 50 |
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| C | | 1 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYN. | | 2 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MONKEY | | 3 | – | 2 CNS | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| 2304 | | 4 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNBOILED | $10^{-3}$ | 5 | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 – |
| MILK | | 6 | – | – | – | – | – | – | 2 | PP P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| + Y-SK | | 7 | – | – | – | – | – | – | – | – | W | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | WW | WW | D | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | 2 | – | – | 2 | 2 | – | – | – | – | – | 2 CNS | 2 CNS | 2 CNS | CNS | CNS | 2 CNS | 2 CNS | 2 | 2 | 2 | – | 2 | – | | |
| D | | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | CNS | CNS | CNS | CNS | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYN. | | 3 | – | ? | ? | – | ? | CNS | CNS | CNS | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | |
| MONKEY | 1:20 | 4 | – | – | – | – | – | – | 2 | 2 | W | 2 CNS | 2 | CNS | CNS | PP | D | | | | | | | | | | | | | | | | | | | | | | |
| 2305 | | 5 | – | – | – | – | – | – | – | – | 2 | – | – | 2 | WW | P CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| UNBOILED | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | WW | CNS | CNS | PP | PP | PP | PP | PP | PP | PP | PP | PP | PP | PP | PP | PP P | PP P | PP P | PP P | D | | | | | |
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| | | 2 | – | ? | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | EE | 2 CNS | 2 CNS | CNS | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 4 | – | – | – | – | – | – | – | – | E CNS | CNS | 2 | E | WW CNS | WW CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-2}$ | 5 | – | – | – | – | – | – | – | – | 2 | – | – | – | CNS | CNS | 2 CNS | 2 CNS | 2 CNS | 2 | – | – | CNS | CNS | PP CNS | D | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | – | – | – | 2 | – | 2 | 2 | CNS | D | | | | | | | | | | | | |
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| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 1 | – | 2 CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 – |
| | | 2 | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | $10^{-3}$ | 4 | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | 2 | 2 | 2 | – | CNS | P PP | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | PP CNS | PP PP | D | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |

# CYN. SERA - NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | No | 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 | ~~SURVIVED~~ MORTALITY | LD50 |
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| E | | 1 | – | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYN. | | 3 | – | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MONKEY | 1:20 | 4 | – | – | – | ? | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| 2306 | | 5 | – | – | – | – | – | CNS | CNS | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNBOILED | | 6 | – | – | – | – | – | 2 | ? | 2 | PE D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MILK | | 7 | – | – | – | – | – | – | – | 2 | EE D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| + Y-SK | | 8 | – | – | – | – | – | – | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | 2 CNS | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | $10^{-2}$ | 4 | – | – | – | 2 CNS | 2 | 2 CNS | 2 CNS | P CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | 2 | 2 | 2 | P CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | 2 | – | CNS | 2 | 2 | 2 | 2 CNS | CNS | CNS | CNS | CNS | CNS | D | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | CNS | CNS | P2 | D | | | | | | | | | | | | | 3 |
| | | 8 | – | – | – | – | – | – | – | – | – | MISSING 9/29 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | – | ? | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | E | E | E | 2 | – | W | 2 | 2 | P CNS | D | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | $10^{-3}$ | 4 | – | – | – | – | – | – | – | – | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | 2 CNS | CNS | CNS | CNS | CNS | P CNS | D | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | CNS | CNS | CNS | D | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | D | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| F | | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYN. | | 2 | – | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MONKEY | | 3 | – | – | – | E | 2 | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| 2307 | 1:20 | 4 | – | – | – | ? | – | – | – | – | W | 2 | WWWP | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOILED | | 5 | – | – | – | – | – | – | – | – | – | – | 2 | 2 CNS | P CNS | D | | | | | | | | | | | | | | | | | | | | | | | |
| MILK | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| + Y-SK | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | P | CNS | D | | | | | | | | | | | | | | | | | | | | | |

# CYN. SERA – NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED | LD 50 |
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| F CYN. MONKEY 2307 BOILED MILK + Y-SK | $10^{-2}$ | 1 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| | | 2 | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | 2 | 2 | E | 2 | – | – | – | – | E | CNS | 2 | 2 | 2 | 2 | 2 | 2 | 2 | – | – | – | – | – | PP | E | CNS | D | | | | | | | | | | |
| | | 4 | – | – | – | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | D | | 4/8 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
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| G CYN. MONKEY 2308 BOILED MILK + Y-SK | $10^{-2}$ | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 3 | – | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 4 | – | – | – | – | – | CNS | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 6 | – | – | – | – | – | T | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 8 | – | – | – | – | – | – | – | CNS | PP | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 2 | – | – | – | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 5 | – | – | – | – | – | 2 | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | 2 | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | 2 | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | D | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | – | – | – | – | – | 2 | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |

# CYN. SERA.— NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED | LD 50 |
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| G CYN. MONKEY 2308 BOILED MILK + Y-SK | $10^{-3}$ | 1 | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| | | 2 | – | – | – | – | – | – | – | – | ENS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | CNS | D | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | EE | PP | CNS | D | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | – | – | 2 | D | | | | | | | | | | | | | | | |
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| H. CYN. MONKEY 2309 BOILED MILK + Y-SK | 1:10 | 1 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | PP | CNS | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 6 | – | – | – | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | (N) | 2 | 2 | 2 | 2 | CNS | CNS | P | D | | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | CNS | (N) | D | | | | | | | | | | | | | | | | | | | |
| | $10^{-2}$ | 1 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | 2 | 2 | 2 | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 3 | – | – | – | – | – | – | – | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | E | P | P | D | | | | | | | | | | | | | | | | | | | | | | | 3— |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | 2 | CNS | PP | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | 2 | – | CNS | P | CNS | D | | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | CNS | CNS | CNS | (N) | D | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | – | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | 2 | – | – | – | – | E | 2 | – | – | P | D | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | 2 | – | PP | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | EE | P | P | CNS | D | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | 2 | 2 | CNS | CNS | P | CNS | PP | CNS | PP | CNS | D | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | PP | D | |
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# CYN. SERA - NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED MORTALITY | LD50 |
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| I CYN. MONKEY 2310 BOILED MILK + Y-SK | 1:20 | 1 | - | - | 2 CNS | 2 | 2 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 3 | - | - | - | - | - | - | - | - | P | - | - | - | - | - | - | - | - | - | - | 2 | - CNS PP | D | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 CNS | CNS | CNS | CNS | D | | | | | | | | | | | 4/8 | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | CNS | CNS | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-2}$ | 1 | - | 2 | - | 2 CNS | 2 CNS | 2 | 2 | 2 | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | - | - | - | - | - | 2 | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | 2 | P | PP CNS | D | | | | | | | | | | 3/8 | $10^{-1.6}$ |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-3}$ | 1 | - | - | - | - | - | - | 2 | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
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| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
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| J CYN. MONKEY 2311 BOILED MILK + Y-SK | 1:20 | 1 | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | 3 | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | EP | CNS | D | | | | | | | | | | | | | | | | | | | | |
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MISSING

# CYN. SERA – NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | NO | 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 | SURVIVED | LD 50 |
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| J CYN. MONKEY 2311 BOILED MILK + Y-SK | $10^{-2}$ | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| | | 2 | – | – | 2 | EP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | 2 | 2 | – | 2 | E | E | E | E | 2 | 2 | 2 | 2 | – | – | – | – | – | – | – | – | – | 2/7 | |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | $10^{-1.7}$ |
| | $10^{-3}$ | 1 | – | – | – | – | – | – | – | 2 | – | – | – | – | – | – | 2 | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 2 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 0/8 | |
| | | 3 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 4 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | 200 |
| | | 5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 6 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| K CONTROL LANSING VIRUS + SALINE | $10^{-2}$ | 1 | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | 2 CNS | CNS | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | 2 CNS | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | – | 2 | 2 | P | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | – | – | – | 2 CNS | CNS | 2 CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 CNS | 2 | 2 | 2 | 2 CNS | 2 CNS | 2 CNS | 2 CNS | 2 | CNS | CNS | CNS | D | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | | |
| | $10^{-3}$ | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | – | – | – | – | – | – | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | – | – | – | – | – | – | – | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | – | – | – | – | – | – | – | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | – | – | – | – | – | – | – | PPP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | – | – | – | – | – | – | 2 | 2 | W | CNS | 2 CNS | CNS | 2 CNS | CNS | CNS | P | CNS | CNS | D | | | | | | | | | | | | | | | | | | |
| | | 7 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | CNS | CNS | D | | | | | | | | | | | | | | | | | | |
| | | 8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 2 | 2 | D | | | | | | | | | | | | | | | | | | | |

7/7

$10^{-3.8}$

STANDARD B & P "NOTEAR"

# CYN. SERA — NEUTRALIZATION TEST

SEP 19 1951

| SPECIMEN | VIRUS | NO | 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 | ~~SURVIVED~~ MORTALITY | LD50 |
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| K CONTROL LANSING VIRUS + SALINE | $10^{-4}$ | 1 | - | - | - | - | - | - | - | - | - | - | - | - | B | - | - | - | - | - | D | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | D | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | CNS | D | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | 2 | 2 | 2 | 2 | 2 | - | - | D | 4/8 | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | ✓ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |

# CYN. SERA - NEUTRALIZATION TEST

SEP 20 1951

| SPECIMEN | VIRUS | No | 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 | ~~SURVIVED~~ MORTALITY | LD 50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A CYN. MONKEY 2312 BOILED MILK + Y-SK | 1:30 | 1 | | | | | | | | | | | | | | | | | | | | 2 | | | CNS | CNS | CNS | CNS | E | E | 2 | 2 | 2 | | | | | | |
| | | 2 | | | | | | | | | | | | | | | | | | | | | | | CNS | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | |
| | | 3 | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | | | | | | | | | | | | | 0/8 |
| | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-2}$ | 1 | | 2 CNS | 2 | 2 | | | | 2 | | | | | | | | | | | | 2 | 2 | | | | 2 | D | | | | | | | | | | | |
| | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | 0/7 | |
| | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1000+ |
| | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | | | 2 CNS | 2 | 2 | | | | | | | | | | | | | | | CNS | D | | | | | | | | | | | | | | | |
| | | 2 | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | 2 | 2 | | | | | 1/8 | |
| | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B CYN. MONKEY 2313 BOILED MILK + Y-SK | 1:30 | 1 | | | | mm | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | | | | | CNS | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | | | | | | | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4/8 | |
| | | 4 | | | | | | | | | | | | 2 | 2 | 2 | 2 | | PP | D | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | | | | 2 | 2 | B | 2 | 2 | 2 | | | | | | | | | | | | |
| | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

# CYN. SERA - NEUTRALIZATION TEST

SEP 20 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED | MORTALITY | LD50 |
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| B | | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | P | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYN. | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | EPS | D | | | | | | | | | | | | | | | | | | | | 3/7 | |
| MONKEY | $10^{-2}$ | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS(CNS) | | |
| 2313 | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| BOILED | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| MILK | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| + Y-SK | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | $10^{-1.6}$ |
| | | 1 | - | - | 2E | 2 | - | - | - | E | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 2 | - | - | - | - | - | - | CNS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0/8 | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-3}$ | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | 250 |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| C | | 1 | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | 2 CNS | 2 CNS | 2 CNS | 2 | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CYN. | | 3 | - | - | - | - | - | - | - | 2 | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| MONKEY | 1:20 | 4 | - | - | - | - | - | - | - | - | CNS | EPS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2314 | | 5 | - | - | - | - | - | - | - | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BOILED | | 6 | - | - | - | - | - | - | - | - | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MILK | | 7 | - | - | - | - | - | - | - | - | - | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| + Y-SK | | 8 | - | - | - | - | - | - | - | - | - | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | - | - | E | CNS | EPS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | 3— |
| | | 3 | - | - | - | - | - | - | - | CNS | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-2}$ | 4 | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | CNS | EPS | EPS | D | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | CNS | CNS | D | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | EPS | D | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | EPS | Pn | D | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | CNS | CNS | CNS | CNS | CNS | CNS | CNS | 2 | 2 | 2 | 2 | 2 | 2 | V | - | - | - | | | |

# CYN. NEUTRALIZATION TEST.

SEP 20 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED | LD 50 |
|---|---|---|---|---|---|
| C CYN. MONKEY 2314 BOILED MILK + Y-SK | $10^{-3}$ | 1 | – – PP D | MORTALITY 8/8 | |
| | | 2 | – – P D | | |
| | | 3 | – – – – 2 CNS D | | |
| | | 4 | – – – – – – – D | | |
| | | 5 | – – – – – – – – – – CNS D | | |
| | | 6 | – – – – – – – – – – 2 PP D | | |
| | | 7 | – – – – – – – – – – – – – – 2 2 D | | |
| | | 8 | – – – – – – – – – – – – – – 2 2 2 2 CNS CNS CNS D | | |
| D CYN. MONKEY 2315 BOILED MILK + Y-SK | 1:20 | 1 | – P D | 8/8 | |
| | | 2 | – P D | | |
| | | 3 | – – D | | |
| | | 4 | – – PP D | | |
| | | 5 | – – – – – PPP D | | |
| | | 6 | – – – – – – P D | | |
| | | 7 | – – – – – – CNS PP D | | |
| | | 8 | – – – – – – – – 2 2 P D | | |
| | $10^{-2}$ | 1 | – PP D | 8/8 | CALCULATED $10^{-3.3}$ |
| | | 2 | – – 2 2 – 2 – CNS D | | |
| | | 3 | – – – – – – – CNS D | | |
| | | 4 | – – – – – – – CNS D | | |
| | | 5 | – – – – – – – 2 2 PP D | | |
| | | 6 | – – – – – – – – – 2 D | | |
| | | 7 | – – – – – – – – – – CNS CNS P CNS PNS D | | |
| | | 8 | – – – – – – – – – 2 2 2 CNS CNS D | | |
| | $10^{-3}$ | 1 | – – – – – – P P P W 2 CNS 2 2 2 – 2 – CNS PP CNS D | 6/8 | 5 – |
| | | 2 | – – – – – – – – – – – – – – – – 2 CNS 2 CNS CNS PP CNS D | | |
| | | 3 | – – – – – – – – – – – – – – – – – – CNS 2 CNS P 2 D | | |
| | | 4 | – – – – – – – – – – – – – – – – – – – – – – 2 2 – – – P D | | |
| | | 5 | – – – – – – – – – – – – – – – – – – – – – – – – – – P PP D | | |
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| | | 7 | – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – – | | |
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# CYN. SERA - NEUTRALIZATION TEST

SEP 20 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED | LD50 |
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| E CYN. MONKEY 2316 BOILED MILK + Y-SK | 1:20 | 1 | - | CNS | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | MORTALITY | +N1 |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0/8 | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-2}$ | 1 | - | CNS | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0/8 | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-3}$ | 1 | - | - | - | - | - | - | - | CNS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0/7 | 1000+ |
| | | 2 | - | - | - | - | - | - | - | K | - | WS (D) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| F CYN. MONKEY 2317 BOILED MILK + Y-SK | 1:20 | 1 | - | - | - | - | - | - | - | - | - | #D | | | | | | | | | | | | | | | | | | | | | | | | 1/8 | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |

# CYN. SERA- NEUTRALIZATION TEST

SEP 20 1951

| SPECIMEN | VIRUS | NO | 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 | ~~SURVIVED~~ MORTALITY | LD50 +NI |
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| F CYN. MONKEY 2317 BOILED MILK + Y-SK | $10^{-2}$ | 1 | - | - | - | - | - | - | - | E | 2 | P | P | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | D | | | | | | | | | | | 1/8 | 1000+ |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-3}$ | 1 | - | - | - | - | - | - | E | - | 2 | ~~D~~ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | 0/8 | |
| | | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| G CYN MONKEY 2318 BOILED MILK + Y-SK | 1:10 | 1 | - | 2 (CNS) | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | CALCULATED $10^{-3.3}$ |
| | | 2 | - | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | 2 | 2 | 2 | 2 | 2 | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | P | E | P | P | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 (CNS) | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 (CNS) | 2 (CNS) | 2 (CNS) | 2 (CNS) | 2 (CNS) | 2 | P | P | P | D | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 2 | - | - | 2 (CNS) | (CNS) | (CNS) | D | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | D | | |
| | $10^{-2}$ | 1 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 2 | - | - | P | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | 2 | 2 | - | D | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | 2 | - | 2 (CNS) | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | 2 | 2 (CNS) | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 (CNS) | (CNS) | (CNS) | (CNS) | (CNS) | (CNS) | (CNS) | (CNS) | (CNS) | (CNS) | 2 | 2 | 2 | 2 | 2 | P | P | P | D | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 (CNS) | 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | (CNS) | P (CNS) | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | MISSING | | | | | | | | | | | | | | | | | | | | | | | | | | |

# CYN. SERA - NEUTRALIZATION TEST

SEP 20 1951

| SPECIMEN | VIRUS | No | 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 | SURVIVED MORTALITY | LD 50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G CYN. MONKEY 2318 BOILED MILK + Y-SK | $10^{-3}$ | 1 | - | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6/8 | 5 — |
| | | 2 | - | - | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | CNS | 2 | 2 | - | - | - | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | - | 2 | P | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | CNS | 2 | 2 | 2 | D | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | 2 | CNS | 2 | CNS | CNS | D | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| H CYN. MONKEY 2319 BOILED MILK + Y-SK | 1:20 | 1 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 2 | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | CNS | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | 2 | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | 2 | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | 2 | - | CNS | CNS PP | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | $10^{-2}$ | 1 | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 2 | - | - | E | 2 | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | PW | P | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | 2 | - | - | CNS | 2 | 2 | P | PP | D | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | P | PP | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | PP | P | D | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 2 | CNS | D | | | | | | | | | | | | | | | |
| | $10^{-3}$ | 1 | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 2 | - | - | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | 2 | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | 2 | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | 2 | P | PP | CNS | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | P | D | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | 2 | CNS | PP | CNS | D | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | CNS | CNS | 2 | CNS | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | | | | | | | | |

LD 50: 3 —

STANDARD B & P "NOTEAR" STANDARD B

# CYN. SERA - NEUTRALIZATION TEST

SEP 20 1951

| SPECIMEN | VIRUS | NO | 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 | SURVIVED MORTALITY | LD50 |
|---|---|---|---|---|---|
| I CYN. MONKEY 2320 BOILED MILK + Y-SK | 1:10 | 1 | - - D | | |
| | | 2 | - - 2 PP D | | |
| | | 3 | - - - 2 2 PP PP D | | |
| | | 4 | - - - - - - 2 - 2 2 - 2 - - - - - 2 PP D | 4/8 | |
| | | 5 | - - - - - - - - - - - - - - - - 2 - - - - 2 2 2 2 CNS - - - | | |
| | | 6 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | | 7 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | | 8 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | $10^{-2}$ | 1 | - - 2 2 - - - CNS D | | |
| | | 2 | - - - - - - 2 2 - PP D | | |
| | | 3 | - - - - - - - - - - - - 2 - - - - CNS P CNS P D | | |
| | | 4 | - - - - - - - - - - - - - - - - - - CNS CNS P CNS P D | 5/8 | |
| | | 5 | - - - - - - - - - - - - - - - - - - - - 2 2 CNS 2 2 2 CNS 2 2 CNS CNS 2 CNS CNS | | $10^{-1.8}$ |
| | | 6 | - - - - - - - - - - - - - - - - - - - - - - - - - - - P D | | |
| | | 7 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | | 8 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | $10^{-3}$ | 1 | - - - - - - - - - - - 2 - 2 - - - - - - - - - - - - - 2 - CNS CNS 2 - - | | |
| | | 2 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | 0/8 | 160 |
| | | 3 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | | 4 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | | 5 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | | 6 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | | 7 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| | | 8 | - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | |
| J CYN. MONKEY 2321 BOILED MILK + Y-SK | 1:20 | 1 | - D | | |
| | | 2 | - D | | |
| | | 3 | - - PP PP D | | |
| | | 4 | - - 2 - - CNS CNS PP PP D | 8/8 | |
| | | 5 | - - - - - - - PP PP D | | |
| | | 6 | - - - - - - - - - P D | | |
| | | 7 | - - - - - - - - - - - CNS D | | |
| | | 8 | - - - - - - - - - - - 2 P D | | |

# CYN. SERA- NEUTRALIZATION TEST

SEP 20 1951

| SPECIMEN | VIRUS | NO | 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 | ~~SURVIVED~~ MORTALITY | L D SL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J CYN. MONKEY 2321 BOILED MILK + Y-SK | $10^{-2}$ | 1 | - | - | P | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | 2 | CNS | CNS | Pr | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | 2 | PP | PP | Pr | Pr | D | | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 5 | - | - | - | - | - | - | 2 | W | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | 2 | - | 2 | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | 2 | CNS | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | E | 2 CNS | 2 | 2 | 2 | 2 | 2 | CNS | D | | | | | | | | | | | | | | | 3 — |
| | $10^{-3}$ | 1 | - | - | - | - | 2 | - | 2 | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | - | - | - | 2 | 2 | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 3 | - | - | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | - | - | - | - | - | - | - | - | - | - | - | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | PP | D | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | 2 | 2 | 2 | - | 2 | D | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | CNS | CNS | D | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | D | | |
| K CONTROL LANSING + SALINE | $10^{-2}$ | 1 | - | CNS | 2 CNS | 2 CNS | T CNS | T CNS | PP T | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | 2 | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | - | - | - | - | - | - | - | W | D | | | | | | | | | | | | | | | | | | | | | | | | | | | 7/8 | |
| | | 4 | - | - | - | - | - | - | - | - | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | 2 | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | 2 CNS | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | W | D | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | $10^{-3}$ | 1 | - | ? | 2 CNS | 2 CNS | 2 CNS | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | - | - | - | - | - | - | - | 2 | 2 | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | 8/8 | |
| | | 3 | - | - | - | - | - | - | - | - | - | PP | PP | D | | | | | | | | | | | | | | | | | | | | | | | | | $10^{-3.8}$ |
| | | 4 | - | - | - | - | - | - | - | - | - | - | 2 | CNS | D | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | - | - | - | - | - | - | - | - | - | - | - | 2 | CNS | E CNS | PP CNS | D | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | D | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | PNS | D | | | | | | | | | | | | | | | | | | | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | CNS | D | | | | | | | | | | | |

# CYN-SERA — NEUTRALIZATION TEST

SEP 20 1951

| SPECIMEN | VIRUS | No. | 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 | SURVIVED | LD 50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K | | 1 | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MORTALITY | |
| CONTROL | | 2 | - | ? | - | - | - | - | - | - | PP | P | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LANSING | | 3 | - | - | - | - | - | - | - | - | | PD | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| + | $10^{-4}$ | 4 | - | - | - | - | - | - | - | - | - | - | - | - | CSD | | | | | | | | | | | | | | | | | | | | | | | | 3/7 | |
| SALINE | | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |