

RECORD

OF

PRINCETON RI ALBINO MICE

ARRIVED: 3/24/50

9 MALES

23 FEMALES

Breeding
Notes
PR1
Mice

MAR 24 1950

Box #1

1 MALE
3 FEMALES

CODE:

MALE - CARBOL FUCHSIN

FEMALES - PICRIC ACID

#1 - HEAD

#2 - MIDDLE BACK

#3 - LOWER BACK

* LITTER #1 4/17/50 4 MICE FROM FEMALE #3 * W

* LITTER #2 4/18/50 7 MICE FROM FEMALE #2 * W

* LITTER #3 5/9/50 8 MICE FROM FEMALE #3 * W

* LITTER #4 5/10/50 7 MICE FROM FEMALE #1 * W

* LITTER #5 6/15/50 8 MICE FROM FEMALE #2 * W

* LITTER #6 6/22/50 7 MICE FROM FEMALE #3 * W

* LITTER #7 6/22/50 8 MICE FROM FEMALE #1 * W

* LITTER #8 7/19/50 10 MICE FROM FEMALE #2 *

LITTER #9 8/3/50 10 MICE FROM FEMALE #3

Box #2

1 MALE
3 FEMALES

CODE:

MALE - CARBOL FUCHSIN

FEMALES - PICRIC ACID

#1 - HEAD

#2 - MIDDLE BACK

#3 - LOWER BACK

- * LITTER #1 4/14/50 10 MICE FROM FEMALE #1 * W
- * LITTER #2 4/17/50 6 MICE FROM FEMALE #2 * W
- * LITTER #3 5/9/50 10 MICE FROM FEMALE #3 * W
- * LITTER #4 5/16/50 8 MICE FROM FEMALE #1 * W
- * LITTER #5 6/15/50 8 MICE FROM FEMALE #2 * W
- * LITTER #6 6/19/50 7 MICE FROM FEMALE #3 * W
- * LITTER #7 6/21/50 7 MICE FROM FEMALE #1 * W
- * LITTER #8 7/19/50 8 MICE FROM FEMALE #2 * W
- LITTER #9 8/6/50 6 MICE FROM FEMALE #1

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Box #3

1 MALE
3 FEMALES

CODE:

MALE - CARBOL FUCHSINFEMALES - PICRIC ACID

#1 - HEAD

#2 - MIDDLE BACK

#3 - LOWER BACK

* LITTER #1 6 MICE FROM FEMALE #3 * W
4/10/50
4/11/50 4 MICE SURVIVED

* LITTER #2 4/15/50 7 MICE FROM FEMALE #1 * W

* LITTER #3 4/20/50 6 MICE FROM FEMALE #2 * W

* LITTER #4 5/1/50 6 MICE FROM FEMALE #3 * W

* LITTER #5 5/10/50 8 MICE FROM FEMALE #1 * W

* LITTER #6 5/17/50 8 MICE FROM FEMALE #2 * W

* LITTER #7 5/19/50 7 MICE FROM FEMALE #3 * W

* LITTER #8 6/2/50 8 MICE FROM FEMALE #1 * W

* LITTER #9 6/10/50 10 MICE FROM FEMALE #2 * W

LITTER #10 6/24/50 8 MICE FROM FEMALE #3 W

LITTER #11 8/4/50 8 MICE FROM FEMALE #1

LITTER #12 8/7/50 10 MICE FROM FEMALE #2

Box # 4

1 MALE
3 FEMALES

CODE:

MALE - CARBOL FUCHSINFEMALE - PICRIC ACID

#1 - HEAD - DEAD 7/11*

#2 - MIDDLE BACK

#3 - LOWER BACK

- * LITTER #1 4/14/50 7 MICE FROM FEMALE #2 * W
- * LITTER #2 4/16/50 6 MICE FROM FEMALE #1 * W
- * LITTER #3 4/18/50 6 MICE FROM FEMALE #3 * W
- * LITTER #4 5/18/50 8 MICE FROM FEMALE #1 * W
- * LITTER #5 6/1/50 4 MICE FROM FEMALE #2 * W
- * LITTER #6 6/16/50 7 MICE FROM FEMALE #1 * W
- * LITTER #7 6/18/50 9 MICE FROM FEMALE #3 * W
- * LITTER #8 7/15/50 10 MICE FROM FEMALE #2 *
- LITTER #9 8/4/50 8 MICE FROM FEMALE #3

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Box #5

1 MALE

3 FEMALES

CODE:

MALE - CARBOL FUCHSIN

FEMALES - PICRIC ACID

#1 - HEAD

#2 - MIDDLE BACK

#3 - LOWER BACK

* LITTER #1 4/16/50 7 MICE FROM FEMALE #1 * W

* LITTER #2 4/16/50 8 MICE FROM FEMALE #2 * W

* LITTER #3 4/18/50 6 MICE FROM FEMALE #3 * W

* LITTER #4 5/29/5 8 MICE FROM FEMALE #2 * W

* LITTER #5 6/7/50 8 MICE FROM FEMALE #1 * W/28

* LITTER #6 7/4/50 8 MICE FROM FEMALE #2 * W

* LITTER #7 7/6/50 7 MICE FROM FEMALE #3 *

LITTER #8 7/29/50 10 MICE FROM FEMALE #1

Box #6

1 MALE
2 FEMALES

CODE:

MALE - CARBOL FUCHSIN

FEMALES - PICRIC ACID

#1 - HEAD

#2 - MIDDLE BACK

* LITTER #1 - 3/27/50 6 MICE FROM FEMALE #2 * W
- WEANED AND BOXED SEPARATELY 4/29/50

* LITTER #2 - 4/14/50 3 MICE FROM FEMALE #1 * W

* LITTER #3 - 4/24/50 3 MICE FROM FEMALE #2 * W

* LITTER #4 5/4/50 4 MICE FROM FEMALE #1 * W

* LITTER #5 5/20/50 9 MICE FROM FEMALE #2 * W

* LITTER #6 5/27/50 8 MICE FROM FEMALE #1 * W

* LITTER #7 6/6/50 9 MICE FROM FEMALE #2 * W

* LITTER #8 6/27/50 8 MICE FROM FEMALE #1 * W

LITTER #9 8/7/50 8 MICE FROM FEMALE #2

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Box #7

1 MALE
2 FEMALES

CODE:

MALE - CARBOL FUCHSIN

FEMALES - PICRIC ACID

#1 - HEAD

#2 - MIDDLE BACK

* LITTER #1 4/10/50 6 MICE FROM FEMALE #2 * W

* LITTER #2 4/17/50 7 MICE FROM FEMALE #1 * W

* LITTER #3 5/7/50 6 MICE FROM FEMALE #2 * W

* LITTER #4 6/10/50 ⁵ 5 MICE FROM FEMALE #2 * 7/1 W

* LITTER #5 6/16/50 5 MICE FROM FEMALE #1 * W

* LITTER #6 7/1/50 7 MICE FROM FEMALE #2 * ?

MAR 24 1950

Box #8

1 MALE
2 FEMALES

CODE:

MALE - CARBOL FUCHSIN

FEMALES - PICRIC ACID

#1 - HEAD → DEAD 6/1/50

#2 - MIDDLE BACK

* LITTER #1 4/16/50 6 MICE FROM FEMALE #2 * W

* LITTER #2 5/6/50 6 MICE FROM FEMALE #1 * W

* LITTER #3 6/17/50 5 MICE FROM FEMALE #2 * W

* LITTER #4 6/15/50 6 MICE FROM FEMALE #2 * W

LITTER #5 7/25/50 7 MICE FROM FEMALE #2

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Box #9

1 MALE
2 FEMALES

CODE:

MALE - CARBOL FUCHSIN

FEMALE - PICRIC ACID

#1 - HEAD

#2 - MIDDLE BACK

* LITTER #1 5 MICE FROM FEMALE #2 * W
4/20/50

* LITTER #2 6 MICE FROM FEMALE #2 * W
6/17/50

PRINCETON RI MICE
FIRST LITTERS

Box	LITTER	NUMBER	DATE TO BE WEANED
1	1	4 MICE	5/15/50 ✓
	2	7 MICE	5/16/50 ✓
2	1	10 MICE	5/12/50 ✓
	2	6 MICE	5/15/50 ✓
3	1	4 MICE	5/8/50 ✓
	2	7 MICE	5/13/50 ✓
	3	6 MICE	5/18/50 ✓
	4	6 MICE	5/29/50 ✓
4	1	7 MICE	5/12/50 ✓
	2	6 MICE	5/14/50 ✓
	3	6 MICE	5/16/50 ✓
5	1	7 MICE	5/13/50 ✓
	2	8 MICE	5/14/50 ✓
	3	6 MICE	5/16/50 ✓
6	1	6 MICE	4/29/50 (WEANED & BOXED SEPARATELY)
	2	3 MICE	5/12/50 ✓
	3	3 MICE	5/22/50 ✓
7	1	6 MICE	5/8/50 ✓
	2	7 MICE	5/15/50 ✓
8	1	6 MICE	5/14/50 ✓
9	1	5 MICE	5/15/50 ✓

PRINCETON RI MICE USED

- JULY 1, 1950 - 48 3-4 wk mice used in Theiler's Virus test
- JULY 17, 1950 - 60 3-4 wk old mice inoculated with D17 Yellow Fever Virus (Comparative Susceptibility)
- JULY 25, 1950 - 20 2-month old females segregated to see if pregnant. Later to be bred with Swiss mice.
- JULY 28, 1950 - 40 - 4-5 wk old mice used in Yellow Fever multiplication test.
- AUGUST 4, 1950 - 45 3-4 wk old mice used in Yellow Fever multiplication test

AUG 8 1950

F₁ Mating between W-Swiss and Princeton-RI Mice

Box 1 - Sw ♀ ♀ ♀ ♀ + RI ♂ - none pregnant 8-26-50

Box 2 - Sw ♀ ♀ ♀ ♀ + RI ♂ - 3 pregnant " "

Box 3 - Sw ♀ ♀ ♀ ♀ + RI ♂ - 1/4 pregnant " "

Box 3A - Sw ♀ ♀ ♀ + RI ♂ - 1/3 " " "

Box 3B - Sw ♀ ♀ ♀ + RI ♂ - 0/3 " " "

Box 4 - RI ♀ ♀ ♀ ♀ + Sw ♂

Box 5 - ~~RI~~ RI ♀ ♀ ♀ ♀ + Sw ♂

Box 6 - RI ♀ ♀ ♀ ♀ + Sw ♂

} none pregnant 8/26/50

NOTE - All females were segregated away from males ~~tot~~ since 7-25-50 - 14 days and only those showing no evidence of abdominal enlargement were used for mating

18 Swiss ♀ + PRI ♂ — 5 pregnant

12 PRI ♀ + Swiss ♂ — None pregnant

Since 3 ♀ became pregnant in Box 2, the PRI ♂ was transferred to Box 1.

The other PRI ♂ from boxes 2, 3, 3A, + 3B were removed for mating with PRI ♀ to test their reproductive capacity.

Three new PRI ♂ removed from PRI ♀ which they had already impregnated were added to boxes 3, ~~Box~~ 3A and 3B of Swiss ♀. Box 2 discontinued and remaining female added to box 3A.

The Swiss ♂ from boxes 4, 5 and 6 were removed and set aside for tests of reproductive (over)

AUG 8 1950

capacity. New Swiss ♂ removed from boxes in which all ^{Swiss} females were already impregnated were put into boxes 4, 5, 6

Question under consideration - is it possible that Swiss + PRI albino's are incompatible? Is there a "lethal gene" combination here, particularly when PRI females are mated with Swiss ♂?

Test of Reproductive Capacity of PRI ♂
which failed to impregnate Swiss ♀

PRI ♀ used: each of 3 mice separated with its young on 8-11-50 for test of young vs. yellow fever virus - mated on 8-26-50 with one each of the PRI ♂ which failed to impregnate Swiss ♀

9-3-50

Box 1 - Swiss ♀ + PRI ♂ - 1 found very large almost ready to deliver. Obviously impregnated by previous ♂

Box 3A - as above - 1 ♀ removed with litter of 3 (2 3 days old) only ♀ \bar{c} mammary glands, apparently used because of prominent nipples

Box 3A - as above - one large pregnant female removed. One ♀ which prev. gave birth to litter of 1 - subsequently found dead - added to 3A

Box 5 - PRI ♀ + Swiss ♂ - litter of 7 mice - 1 dead (2 1 day old) - removed to separate box with probable mother

Box 6 - as above - one large pregnant mouse removed to sep. box

Breeding Notes - Continued

9-6-50 Box 4 - PARI ♀ + Swiss ♂ - ² ~~one~~ large ^{pregnant} females separated.

Box 5 - as above - 2 large ^{pregn.} ♀ separated

Box 6 - " " - 1 large ^{preg} female removed
1 newborn mouse left in box

Weight of Mice Resulting from Crossing PRI Females with Swiss Males

It was observed that the mice from such a cross are very small and that they develop very slowly, i.e. at 14 days they are tiny and seemingly several days behind; at 21 days - almost as small as others at 14 to 16 days. Many litters failed to survive beyond 14 days.

The following litters were weighed:

Litter of 8 mice born 9-10-50

At 22 days of age - average weight = 5 Gm.
" 30 " " " - " " = 9.5 Gm.

3 ♀ and 5 ♂ - all used for inoculation 10/10/50

Litter of 5 mice born 9-11-50

At 21 days of age - average weight = 5 Gm
" 29 " " " - " " = 8.4 "

4 ♀ and 1 ♂ - all used for inoculation 10/10/50

Litter of 9 mice born 9-12-50

At 21 days of age - average weight = 4.6 Gm
" 28 " " " - " " = 6.8 Gm.

Mice are so small and genitalia so poorly developed that sex could not be ^{determined} with certainty. ♀ - 2 definite, 4?, ♂ - 1 definite, 2? - all used for inoculation 10/10/50

Litter of 6 mice - born 9-12-50

At 21 days of age - average weight = 6.8 Gm
" 28 " " " - " " = 12 Gm.

One ♀, 5 ♂. The males all inoculated 10/10/50.

The ♀ used for backcross with PRI ♂

Litter of 2 mice born on 9/14/50

Both big = 33 Gm - or 16.5 Gm. each
♀ used for backcross

PRI ♀ + Swiss ♂

<u>Date of litter</u>	<u>Size of litter</u>	<u>Average weight (Gm)</u>		<u>No alive 3 weeks</u>
		<u>3 wks</u>	<u>4 wks</u>	
9-10-50	8	5	9.5	8
9-11-50	5	5	8.4	5
9-12-50	9	4.6	6.8	9
9-12-50	6	6.8	12.0	6
9-14-50	2	..	(16.5?)	2
10-5-50	8	5.0	7.5	8
10-10-50	11	7.5	8.3	8
10-20-50	9	3.3	7.0	9
10-28-50	11	6.0	9.4	8
" " "	12	3.9	6.0	4
10-29-50	10	6.0	10.0	7
10-16-50	9	7.0	11.4	5

Swiss ♀ + PRI ♂

9-30-50	4	9.5	14.5	4
10-29-50	9	6.3	11.1	9
9-24-50	8	6.5	10.9	8
10-29-50	10	6.0	10.0	7

Back cross Breeding Record

F₁ Mice X Swiss (♂ or ♀)

10-7-50 - F₁ (S♀ + R♂) - born 9/4/50 - 3♀ + Swiss ♂
1♀ - litter of 6 on 11/3/50
11/22 - 2 other females still not pregnant

10-7-50 10 young Swiss females ^(21-28 days old) set aside until
10-21-50 - None became pregnant
To each box of 5 was added one
F₁ ♂ (S♀ + R♂) born 9/4/50
11/10/50 - litter eaten - mouse returned to breeding
11/12/50 - litter of 4
11/16/50 - " of 7
11/18/50 - " of 8
11/18/50 - " of 8
11/22/50 - " " 7
11/
11/

Weights of PRI Mice

for Comparison with those Resulting from Crossing
of PRI with Swiss.

Procedure - Pregnant Females were separated 10/7/50
Litters were weighed at 3 weeks and
again at 4 weeks.

<u>Date of litter</u>	<u>Size of litter</u>	<u>Average Weight</u>	
		<u>3 weeks</u>	<u>4 weeks</u>
10-9-50	8 mice	6 gm.	7.3 gm.
10-10-50	2 "	8 gm	11.5 "
10-12-50	7 "	7.8 "	9.4 "
10-13-50	7 "	9 gm	12.0 "
10-9-50	Eaten		

Weights of Swiss Mice

10-13	11 mice	6.6 gm	10.8 Gm
10-13	12 "	6.4 gm	10.9 Gm