Thank 12/1951.

(A) (B)

776-370 and 373 were found to be lysogenic for W518. Also for W811.

Pick plaques in W518 to produce a W518 E4.5, although supplied as separate cultures, 370 and 373 may not be identified. They were the sole S + in this group, and resemble each other culturally.

Now of 8 W518 recovered came from plaques from A and B.  

Deanimate A + B together with W518 for preliminary growth of the phages.

High titer stocks obtained on W518. W518 survivors were

\[ x^{370^5} 18/20 \]

None lysogenic.

Attempts to induce or modify lysogenicity were \( x^{370} \).

Deanimate survivors + X 370 rocks into lysis assay.

1. W1248 pr - 
2. 1027 - 
3. 1177 R + 100% were lysogenic against 01177
4. 677 S + 
5. 660 S + 
6. 58-161  
7. W518 + X + X 370 + X 370 3/40 each tested none lysogenic against 01177
**anti- K12 lactose**

A + B + C

Antigen 5ml 1:10 1:20 1:80

Antiserum 5ml undil. (Serum 117)

Incubate at 37°. Then refrigerate

Submerge the precipitate.

a) Supernatant: Dilute A 1:4 & 1:2 C 5% w/v

Take 1ml samples to 5ml H2O, 1ml nph 1/200 in 1/20 buffer

Incubate 37° 10 min. Add 1/1 Na2CO3.

npg: A > B > C.

b) Wash pots twice. Resuspend in 1ml saline. Assay 1ml samples as above, 20 min. Add Na2CO3.

npg A > B > C. CA 1/5 as active as supernatants

A
B
C

.5ml antigen .5ml antiserum .5ml volume

A
B
C

.05 .05 .05

D
E
F

.17 with .5ml NaCl rather than serum

G
H
I

= 3x washed pots of ABC.

Assay 1ml sample, equivalent to 1/100 dilution (C).

Calibration of 1/2

Protection of 1/100

As a result of

Add antigen
Assay antigen:
dilute 1:100, 1:1 with saline, then as
in previous assays.
ca 500.
3/13/77

H289 is M + xyl + lac + Mal-, + v?

Dissolve D(Mal) 10 ml with mixed growth from original EMB + H + Streptomycin, incubate 3 days 24h. Plate out at 10° on EMB Mal, EMB Mal, M + H.

EMB + H plating shows 90% M + H. On EMB Mal, no clear Mal- colonies are seen, but numerous motheaten Mal++; which might be Mal +/- ... v.

> ca 30: all Mal++ 20 all + Mosty M + H.

This "culture" is probably a duplex pair Mal+, - vap.
Check Mal- for hemizygosity.
3/17/44. /52.

H288 is Lac- MHv Xyl+ Hal- from Wy66 x W1577

Each of 16 lac+ revertants membrane lac was found to be lac+ MHv but the latter character is difficult to score.

lac- derived from reverse cross is also homozygous.

From this one might argue that the corresponding lac+ found in the cross Wy78 x W1490, etc., are also homozygous.

Compare 819 for similar data in Hal.
March 22, 1981

A W1490 x W1511 (w-1 Mhp) on EMS lac.
B " x 1578 (w-1 xyl - )
C " x 1519 ( " )

A 40 lac + picked, streaked EMS lac. Lac: 1-4 1-6 (xyl ).
B. 100 lac + (light) picked (Misslem) and streaked in EMS lac. Mostly lac - !
C. 40 lac + picked.

Selection ratios: B among lac - 9 xyl + : 51 xyl -
C " " 14 + : 46 -
B: 13 : 78 -
5 : 15 -

loc + : C : 7 + : 22 -
B : 3 + : 30 -

A. lac + Mal+ Mal+ Mal+ Mal- Mal- Mal- Mal+ Mal+ Mal-
Lac - 3 0 18 0

Very close linkage of Mal to Mal. Also seen in heterozygote behavior.
March 26, 1951.

1, 2, 3 : HtH - Mal - lac v. Growing poorly on EMM loc.

These heterozygotes grew almost as - a reaction in EMM loc, requiring 48 hours to give a full - a reaction. (Modifier or pleiotropic effect?)

Each gave a HtH + lac v - a reaction with stronger lac + reaction.

HtH - is homozygous.
<table>
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<th>Lac</th>
<th>Ral</th>
<th>Xyl</th>
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<tr>
<td>1</td>
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<td>V</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>V</td>
<td>-</td>
</tr>
</tbody>
</table>

\[ \text{Xyl}^+ \quad \text{Xyl}^- \quad \text{Xyl}^+ \]

B. B, C, 1 EMS start colony was picked as purified haploid stock.

3, 4, 5 each gave Xyl- recessions after storage on EMS Xyl

\[ \text{Xyl}^- \text{ bnc} \text{ is Xyl}^- = \]
<table>
<thead>
<tr>
<th>$\text{Lac}$</th>
<th>$\text{Met}$</th>
<th>$\text{Xyl}$</th>
<th>$\text{related Ekh}$</th>
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<td>v? \text{- methed brolyn lacy. May be } \text{Lac}+\text{Lac}+</td>
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<td>20</td>
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Note correlation has also between $\text{Xyl}+$ and $\text{Met}+$. Would it be possible to arrange to have $\text{Xyl}+$ media removed to verify the homozygosity of $\text{Xyl}+$ in this case?
### March 30th, 1951

#### A. Lac*A 83 \times W660 \times Y105R

<table>
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<td>13</td>
<td>122</td>
<td>32</td>
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Total: 1458  21%  1688

#### B. Lac*B 25 \times Y1585

<table>
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<td>7</td>
<td>80</td>
<td>154</td>
<td>37</td>
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Total: 252  95  32  64

#### C. 88 + 36 \times 77 + 31 = 129

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<th>21</th>
<th>17</th>
<th>124</th>
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<td>1</td>
<td>7</td>
<td>16</td>
<td>19</td>
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</table>

Total: 124  113  134  134

R, 3 umo, 5 UCLA
March 26th 1951

A. W78 x W660
B. 58-161 x 

C. Cross x W-1177 with 5% solution (peptone + glucose) E15 % select 24 prototrophs

D. Isolate various prototrophs for crosses.

3/29/51.

1212 x W1177  
777+ x  

K x 1590  

lac + 5SRP  
9+/41-  
8+/45-  
1+/10-

K-12 x W1589  

= DH lac - Mal- S-

A) 1594  
1585  

1,2,3,5 lac-  
4,6,7 lac+  
not proton.

B) Mostly Mal-.

C) & D. Mostly lac + Mal+. Lac- not correlated with Mal-
April 7, 1951.

Lact + Met from B, C, D x W1177. EM565 ac, 77°C
B (+) 4 plates 1 lac
C (+) 3 plates 1 lac
D + 4 plates 0.

K
1 2
A 1 2
B 1 2
C 1 2
D 1 2

Repeat A (extreme ratio)

L+ L- 1/10
A10 97 23 *
A11 83 17 *
B1 25 * 95
B2 "32 " 69
C4 28 * 78
C5 82 14 *

of K x W1177 1015 1022
lac+ 90
st1c ulc

Not surprising since 1015 and 1022 are S5!!!
H245 and 246 recombined.

Grow in D(lac) + Biotin. Cross H245 x W1177
H246 x W1387

Recheck methods:

H245
246
protochiches?

\[
\begin{align*}
833-1 & \quad M^- \quad \text{Sure lac }^+ \quad \text{same spotting} \\
833-2 & \quad M^- \quad \text{lac }^-
\end{align*}
\]

\[
\frac{15240}{2754A1}
\]
April 4, 1951.

H245 Tl- Lac Mal Xgl Mlh v H390 M- Lac v Xgl- Mal-

A. H245 xH290 EMS Lac, Mal

B. H245 x W1367

C. H290 x W1385 (=: wild type) 

---

A. (lac): occasional lac-, wide range of lac+ types. Probs 40:
- All are lac+ except # 6, 8, 30, which are lac-. The absence of
  lac+ is easily understood as the parents are each doubly heterozygous.

B. As A (lac)

C. Mostly -? +  

(see over)
4/20/51. Probably +/ -

Maybe ++/ - ?
April 7, 1951.

Residual 1:40 melbhom (7/7), EMS lac (9/18) -> EMBlac 7/7 (Hilliker) repeated.

Lac + except 6, 8, 30. 28 maybe +. 30.

M +, 6, 8 appear melv +, lab + above. 28 is mel+.

(41-80: 41, 50, 52, 61, 64, 67, 69, 77 are lac-, all others +.)

410. Repun. single EMS lac + 28 -> lac-, lac -

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<td>32</td>
<td>V</td>
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</table>

Definitely -> occasional mel-, mel -.

Melv +

Melv +

Melv +

Melv +

V - compare original and derived.

Apresviously, it is difficult to distinguish meland MTY from + modified by segregation of other factors. But most or all appear to be mel+.
Compare B3A(original) and B3B(demir)
April 7, 1951.

H245 x W1367  
S Malt Lac-  

4/9/51. Replicate single E35bac colonies and test:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V |

1. Mal +  
2. Lac-  
3. M +  
4. -  
5. +  
6. Weak or moderate  
7. Mal-  
8. -  
9. V  
10. V  
11. V  
12. V  
13. V  
14. V  
15. V  
16. V  
17. V  
18. V  
19. V  
20. V  
21. V  
22. V  
23. V  
24. V  

- too few initial 24 cultures for critical determination  
- + noted + V in final column

A number of types are probably represented. Mal- should be specifically treated for hemi-gyroseity. Study for distribution of Lac- / Lac+.

Assume Lac+ to be present.
Plateout B1, 12, 15, 16 from D (lac) to EHS lac, Mal, E75.

1. lac+, relatively stable
   Mal Halted, No -.

2. lacV (kee stable +). Mal highly variegated, mostly -.
   ca. 25 Mal+ and Mal- segregants per lac- colony
   EHS Mal: Pure +
   Pure +, ~ about =
15 lac- lib 1. Mal: Pure - Plate in EHS Mal

16 lac- (lib 1) Mal lib 1.

Mal+ are apparently Mal+, with segregating modifiers. These should perhaps be studied as stable hybrids.
B2 should be studied for independence of Mal and lac segregations.
April 7, 1951.

Recover from EMB lac. 4 lac+ 4 lac-
also test 12 other lac - for S(R) (EMB  
(remember S's on EMB Mal.)

\[
\begin{array}{c|c|c|c}
\text{Lac} & \text{Mal} & \text{(cm)} \\
1 & V & V & S \\
2 & V & + & R \\
3 & V & V & S \\
4 & + & + & R \\
\end{array}
\]

This illustrates that Mal is not eliminated in their 
2n x 1n cross (unless #2 is hemizygous). It should 
perhaps be repeated to look for Mal-

D: W1490 x H245

\begin{array}{c|c|c|c|c|c}
\text{Lac} & \text{Mal} & \text{EMB} \\
1 & V & V & 3 & 5 & 5 \\
2 & V & V & 5 & 5 & 5 \\
3 & V & V & 5 & 5 & 5 \\
4 & V & V & 5 & 5 & 5 \\
5 & V & V & 5 & 5 & 5 \\
6 & V & V & 5 & 5 & 5 \\
7 & V & V & 5 & 5 & 5 \\
8 & V & V & 5 & 5 & 5 \\
9 & V & V & 5 & 5 & 5 \\
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11 & V & V & 5 & 5 & 5 \\
12 & V & V & 5 & 5 & 5 \\
13 & V & V & 5 & 5 & 5 \\
14 & V & V & 5 & 5 & 5 \\
15 & V & V & 5 & 5 & 5 \\
16 & V & V & 5 & 5 & 5 \\
17 & V & V & 5 & 5 & 5 \\
18 & V & V & 5 & 5 & 5 \\
19 & V & V & 5 & 5 & 5 \\
20 & V & V & 5 & 5 & 5 \\
\end{array}

EMB Mal scoring imperfect.
all $S^3$ on $E_{113}$ Xyl

These explain assembly. More particularly assembly from cut-out 16 plates. Shell from 10 and 23.

There are all - hole - hole - hole.

So one has an assembly.

Appropriate to ensure early. Appropriate.
April 21, 1951.

Compare original and derived (selected as Malv) from 833:

1. A9 = -d lac

   Plaques noted in thick streak. Mostly lac- and background.

2. B3 = -d lac

   only

Plaques may be unique phase, rather than A9.

This is confirmed. The phase attacks all A*, A* strains and rec-assent mutants are not altered to X (E.M.L.)

May be merely a contaminant. See EM 163
   ?? Are lac- haploid or diploid zygotes ??

B. Majority are Mal+ (probably not Malv). Also, seemingly S^R, including #2.
   Some would be expected to be S^R/S^R.

C. Many lac-.

D. Mostly lacv Malv. ?

E. ditto no S^D

F. ditto no S^R. Malv +.

The Malv complex of H245 is retained intact irrespective with BM. Review H290 behavior.
March 30, 1951.

A H283 x W1177
B " W1490
C " W1387

M EMS lac sm.

Studie
ca 20-30 lac+ → pure lac+
1 lac? → lac−

Should be repeated if a reason to carry out this experiment can be thought of.
April 2, 1951.

a) Ascertainment through adult crossing $\rightarrow$ 2 lac/40 tests $\rightarrow$ 835 C1 - C2

b) Linkage relationships - preliminary survey.

A. 58-161 x W1022  $\pm$ B, $\{\}$ on ETS lac, Mal, Mtl

C. 58-161 x W1178 EMS lac to isolate lac

<table>
<thead>
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<th>L  H  M  Mtl</th>
<th>L  H  M  Mtl</th>
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<tr>
<td>12 20 60 20 10 65 34 21 10 62 6 (2?)</td>
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<td>+ -</td>
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<td>A (+B):</td>
<td>L  H  M  Mtl</td>
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<td>Mtl 19 16 4 12</td>
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<td>+ -</td>
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C1, C2 are two lac
isolated from Yokes.
Both are Mal - purified
and segregate

Mtl occurs relatively frequently, not
necessarily associated with lac-, mal-
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<th>Xyl</th>
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See 845

Lacto-feta (Tetra. Xyl, MH, )

No lac - V, linkage seen.

Lac  T: Mal
Pool with lac- from EMS lac crosses to pick out on EMS lac to purify and complete characterization:

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<th>T5</th>
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% 1022 parent among lac:

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lac+ not greatly different from lac except for slight increase in
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April 26, 1951

S8 161 x W1022

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1.5% - 12.8 1

Student 740 EMS Lar + EMS Lar.

3 -

EMS Male

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S. second col.
April 2, 1951.

A 1528 -> lacv: Hfr- I Hfr- I Hfr- I

B 1511

C 1512

D 1513

Most tests done, definite EM10! Replicate likely back from EMS and retest!

A 2/8 (lacv 1 Hfr- 2 Hfr 3, 4, + lacv 5 lacv 6, 7-8+)

B No pecularity into cross (cf. 831 A) 35-40 arb.

1 Hfr+ lacv

2 " "

3 " "

4 Hfr- lacv?

5 Hfr- lac+

6 Hfr- "

C 1512 ? No clear lacv. Repeat cross on EMS lac.

D 1513 S

B. Single colonies / prototrophs, which. EM15 lac+

1 alcd lac V Hfr+ all Hfr+

2 v + (+ mottled)

3 + v + (Lac somewhat faded)

4 + faded +

5 + faded +

W1511 Hfr+ has some epistatic affect on lac+. cf 831 A

C: Repeat cross 4/3/51. EMS lac.

Pongold.
April 4, 1951.

w1508 x w1490.

16 picked and tested back from 40 initial tests.

1-10 have Mtl+ (oct.).  11-13 lack Mtl-  
Apply for hemizygocity tests.

Check single E. coli colony mutants:

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<th>Harm</th>
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Linkage data:

Mtl+  
Lac+ 2  
+ 1  
19

no linkage to Lac

Check out 11-13 on E. coli Mtl for reversions.

Reversions apparently pure Mtl+!  V  Mtl+ Lac.

The Mtl+ may well be a suppressor mutation.
April 5, 1951.

C W1490 x W1512.

- 0 check linkage M14 lact + lact - colonies to EMS M14

M14 lac + 5 2
- 15 18

no direct interaction.

Pick 40 colonies, streak on EMS lac for v.

lact, some are of lighter tinct.

No lac - !

Check M14 character for further linkage tests to EMS M14

D W1590 x W1513 36 colonies for lac v.

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Quick transfer: linkage below:

+ 13 7
- 4 14

clean linkage to lac (probably to right

on v6 lac M14 v1 54...
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April 12, 1957

A. H257 suspension from D(a-c) streaked on EMB lac, thal and possible 5a lac v or Malv upplaid for escherichia amnistropho. 2 apparent bac v (from several hundred x2) recovered; both amnistropho 8671-1 and 4-2. While mutatio 5a+, etc. Both are Malv - 1 eventually grows on D(a), but failure on D(1213) or D(134)
   6-? or prototrophic.

2. D(0) =
   D(1213) =
   D(128-1) =
   D(134713) +.

B. H267, through Petunia. Plate - ca 10% bar v.
   Test colonies from EMB to 0(0).
   50 lac v. # all prototrophic #16
   10 H+V
   6 Malv #16.
   # 3 ?

C. H257

35 lac v. #17 amnistro.
31 Malv #7 ?

C1 Malv Xyl MT + LT L -

n.g. for crosses. no protogrophy: not intragenous.
April 20 1951.

A. Gradiate H257, UV 2 40 sec. UV 20 cm. 3% sec. 0.

B. Pile back center and stable back, 0113 arc.

C. Pile back 0+ (5?) and 0113 arc 0D(0), 0113 arc (no known organization).

D. Initial plateaus ope and 2.5% Sr arc. Immediately after UV, this seems to be 6.5%.

Some "bar" just very strange - bar = 5 &REGARDS! (Write 52)

Check for plateaus:

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From P.S. i.e., ca 9/11 very long ads. Also add 6. 4/8.

Note very high frequency of "enlargements" here (original H267 was SRS)

A. H257. 38 test. / 38 tests.

11/24 Pile back center 40 vac (usually 0) from H257, 267 arc menobare. Pile possible back (stable back) for test with 5 sec.

D) UV - on stem medium; backdrop single back.
April 16, 1951.

A series of 5^r mutants isolated from W1483. (A - F)
(Leu Trp Lac - Mal - 5^r)

1. Grown separately
   A. K12 5 E45
   B. A 5
   C. A + K12 5

   D 5^a - 161 x A on E45 lac.

2. Grown together K12 +
   A ... F

3/20/51:

1. A 0
   B. 0
   C. 1 Lac + Some very tiny papillae.
   D. ca 10 small colonies, mostly lac + or very small.

2. A 2+ 3 -?
   B. 2 + Trp + papillae in background. W1611
   C. 6 +
   D. 12 + 1 -
   P. 6 + 1 -
April 17, 1951.
"B" c
Br Bro 68:161 and 0:177 together overnight.

A R. Heat shock to "A". Note immersion 2:15 PM

1. A 5 each (both, could not be effectively sedimented)

2. B .5

3. C .5

4. B + A .5 each

5. C + A .5 each

6. B + C .5 each.

7 1 2

8 1+3

Heating inadequate. Too low strength.

A. (i) No prototrophs, but Bac - (W177) only survived.

B. 7

c. 3 - gave prototrophs. W177 contaminated. Epz. Wettles.4
April 20, 1951.

W1606 x 837B1 (W16A3 x 8 SD x T(L)) - lac VIP+ Melv...
Plate on EM58 lac, EM5 lac + sm.

837B1. E73 lac mostly tested
+ sm: faintly blue, no growth; 2 lac +

Enterol also gave lac+ prototrophs. e.g., ferrous
Better stock needed

2 lac - 1 lac+ grew out. Test on sm; shift out on
EM505 Mal.
April 21, 1957.
W1894 x H290

Mostly lac+.
11 - (c1 - 2%) (8c 833c).

lac - 2 of these are Malt - mE245 mult (= Total).
2 are Real -
7 Malt +.

V for SV

20 lac+: all lac+ S^R (not v)
8 lac -: 8 Malt + S^R 4 Malt - S^S 1 Malt - S^S (pau'd in Malt + S^S).

Most of these are evidently not diploids.

Repeat course.
described tentative from H257?

1. At least one *-* noted which gave *-* microbead with
   *-*. Resteles: apparently pure *+*. Test single colonies
   against *+*

   -> No *-* found in *+* strains
   (previous *-* may have been spurious?)

   Replicate from boundary of *-* inhibition, and
   plate on EY5 *+*

   If there are hybrid *+*s, we must greatly increase rate of
   crossing-over.

9 additional H257 *+* 7 5 *S* 3 *S* 1 *SR*
9 " H257 7 5 *S* 2 *S* 2 *SR*

* I grew relatively few *SR* Rehdele + compared with H257. It
  may be unstable.
Replicate crossing of strain 3. Set out and prepare for mutation characterization.

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<td>S+</td>
<td>MalV</td>
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Final Ret:  

Mal- S: R

Keep:

- ✓
A

April 27, 1981


b. Pre-27. 18.

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60 partial segregants in 6 groups totaling 48 lac+ colonies.

66 lac+ colonies isolated from plating of Hr67 (without UV 30 sec).

Each group are lac+ from one colony.

Nucleic acid is EMBlac in 2000X.

Velvet transfer.
May 4, 1951

5 PM

Streptococcus EMBLae

5/5

5 PM

5/6

5/8

A. Tetrahionate Broth:

(2 tubes)

1. Filtrate .5 ml no colonies on sh.
   <
   0

2. K-12 .5 ml lact++
   ++

3. Filtrate + K-12
   lact++
   ++

4. T2
   lact-
   lac-

B. Pen assay 10 ml

1. Filtrate .5 ml
   0
   0
   0

2. " + Bovine serum 1 ml
   0
   0
   0

3. Serum (stability control)
   0
   0
   0

4. Serum + longful T2 (Frederiksen) ++++
   (control)

C. SS - Agar

1-2 sterile K-12, T2
   turbid
   SS does not
   inhibit K-12

3 Plate filtrate .1 ml
   0
   0
   Markedly

4. Filtrate + K12.

D. 0(0)

1. T2 Filtrate
   0
   0

2. " + W 677
   0
   Numerous
   pinpoint
   background
   +++
   Few pinpoints.

3 T2 cells

4 W 677

E - F

EMB

1. Filtrate

2. Filtrate + 677

F = E

2. + W17

G = E

H++ 1 col. = lac - NH4+
   Xyl-
   M+ - Xyl-
   M- - Xyl-
   m + m

+ + +

Papillae may slow-
   Xyl -

Not Salmonella!
Salmonella  E. coli contamination

A. Grow W1517 + T2F in Bismarck noir broth. Plate washed cells: all sterile

B. Grow W1517, 1 ml + 1 ml in EMS lac, D/0, 8414F
   a. 15L7 control § no colonies
   b. 8414F § no colonies
   c. mixture: ca 2 very tiny "lac" per plate. Replicate to EMS lac.
      only lac +

D. T2F ( + 5W435 → ) prototroph and D/0
   8414F § 5W414 § no prototrophs

No interaction of Salmonella tryptophan with E. coli could be found.
May 8th, 1951.

\[ 58^{-161} \times W 1619 \]

A: Pick 60 lact+ \( L + E R S \) to lact, Mal, Mhc, \( \frac{EMB}{Xyl} \)

B: 40 malt + 5 lact+ \( L \) by decal.

Fast transfer to lact, mal, Mhc, \( \frac{EMB}{Xyl} \)

C: EMB malt plate. \( \frac{EMB}{Mal} \) - 40+. Decal to EMB lact malt Mhc:

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Of 47 tests by transfer, 34 lact+, malt+ Mhc+

\[ \frac{EMB}{Xyl} \]

No evidence of linkage of Mal, Mhc. Of Y-Loci??!!

B. Transfer test: 40 all lact+

\# 6, 19, 37 lact-

\# 12 Mhc-

Nme Xyl-
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1. \( \text{lac}^+ \) : 1 ha 333
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   1 ha 333

2. \( \text{Mal}^- \) : 1 ha 40
   1 ha 40
   1 ha 40

3. \( \text{lac}^- \) : 3 ha 44
   3 ha 44
   3 ha 44

B. 

1. \( \text{lac}^+ \) (60) + Mal, Mal
   + + + 35
   + + + 35
   + + + 35

2. \( \text{Mal}^+ \) (40) + 3 lac
   + + + 1
   + + + 1
   + + + 1

C. 

1. \( \text{lac}^- \) + Mal
   + + + 20
   + + + 20
   + + + 20

2. \( \text{Mal}^- \) + 6 MEC
   + + + 5 MEC
Attempts at Δ diploide

H291 x W1027 in EMS lac.

A) 20 isolated to EMS lac. - Petri on W578 sterile EM13 lac. ) all lysogenic

B) 20 addnl. lac+. Reprtify. all lysogenic.
May 15, 1951.

A. W1606 x 843-6  E45 Lac 5 plates S\textsuperscript{R} / S\textsuperscript{D}; Hal+, +

B. " x 843-7 " " " S\textsuperscript{R} / S\textsuperscript{D}; Hal+, +

---

A. 13 lacv.  All S\textsuperscript{R}.  #12 shows some apparent sensitivity to m. Recheck.
  Once all to limaassay for later v in S\textsuperscript{D}.

B. 20 lacv.  All S\textsuperscript{R} in EMS Lac.  With spreader S\textsuperscript{R} lacv, lacv.
  On EMB/Hal plates:

\[
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\]

som "bleaches" colonies in its vicinity after 36 hours. Hal+, am phla.
see 2cm.
A  W1177 x 1632
B  W1619 x 1632

\[ D(0), \text{ EMS lac.} \]

\[ \frac{A}{A} \]

\[ \frac{B}{1} \]

\[ \begin{array}{ccc}
\text{lac} & \text{M13} & \text{M13P} \\
+ & + & 6 \\
+ & - & 4 \\
- & + & 2 \\
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\[ \begin{array}{ccc}
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May 14, 1951

(from PY33A, male+)

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Legend:
- T: Transformed
- L: Ligninase
- (+): Positive
- (-): Negative
- V1: Selection

Signature of 4267.
May 16, 1951

from 843 a male -

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H267 is $V_1^{R_{27}}$

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20 21 22 23 24 25 26 27

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1 2 1 1 1 1 1 1

1 1 1 1 1 1 1 1
May 19, 1950

H 267 3 x 10^-6; .01 ml / plate

10^10 AM S/h +ve O all plates.

1. 10:00 AM.
2. 11:05
3. 11:40

5 7 620
6 320

A = control
B = UV 20

15, 16, 0 pet. d.

12

7, 9

3, 12

11 - 4

3 2 - , V. 0

2 - 13 / hr