

Hollander, W.F. Gen. 28:76 - 1943 Abst. A possible case of delected mutation in the pigeon.

♂♂ \bar{c} sexlinked Almond a^m \rightarrow mosaics of brown and a^{bl} .

$Al \cdot a^+$ \rightarrow mosaics \bar{c} black but never brown.

do. $Al \cdot -$ (homozygous ♀).

Evidence that $Al \rightarrow a^+$, etc. If so, mutation is delected by the other allele. (rather than somatic loss or crossing over).

Sonneborn, T.M. do.: 90 Development and inheritance of neurological characters in variety 1 of *P. curvirostra*.

Stork's ♂ has antigen; ♂O lacks it. Single dominant gene.

$P \times \text{♂O} \rightarrow$ some homozygotes which retain antigen 4-8 fissions (cytoplasmic lag).

$Aa \times aa \rightarrow$ slowly developing antigen detectable only after several fissions + increasing to standard level.

~~Anti - A kills most~~ of

Anti - ♂O kills most individuals, but some resistant ones.

lost within a few fissions unless continued exposure to serum.

Some (not all) retain their resistance (275 generations); others lose it more rapidly. Lost at endosperm or fertilization (or Dauermodifikation!)

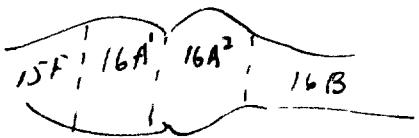
Note: bar is dominant.

Seltzer, E. Genetics 28: 97 - 1943 Bar eye in *D. melanogaster*: a cytological analysis of some mutations and reversion mutations.

Sum: Hemizygous ♂, and Bar deficiency have no phenotypic effect.

The Bar effect is produced by interaction with other loci which may mutate ... The Bar effect may be destroyed by mutation of one of the two interacting loci, or well as by separation of these loci through chromosomal rearrangement.

Reversals:



- a) deficiency of a duplication, incl. 15F - 16A.
- b) inv. 16A¹ - 17A.
- c) undet. change
- d) def. 16A¹A²
- e) del 16A.
- f. " - long from 16A¹ to 16A²
- g. " - 16A¹ to C.

Similar effects in Double Bar.

Oeshov, S. L., Acta Path Microbiol Scand, 12:523 (1945) Investigation
of the permeability of yeast cells.

White
Woolley
Hutner

G+F.

Grob, D., JGP 29: 219 (1976) *Pectolytic Enzymes* F.
P.4.

Strong, L.C. XII. Yale JBM 18: 145-155 (1946)

The effects of selection toward resistance.

1. Melch reduces ap. tumors in homozygotes; likewise in heterozyg., particularly in strains selected for resistance to local tumor formation.

An increased mutation rate is also postulated.

Mouse strongly selected for resistance.

1. More subline, no change [biotype - pure line?]

2. In 4 lines, a decrease, but accompanied by an increase mutation rate to susceptibility.

Overy, F.V., J Agr Res. 71:423 1945 - Cytoplasmically inherited
male sterility in sugar beets.

Ostengren S. Hereditas 30: 213-16 (1944) An efficient stain
for the distinction of stickleback chromosomes.

Allum's costs 3da. 1molar.

Huxanography

Hevesi, W. JPB 57: 457-466 (1975) /The effect of agar depth in the plate method for the assay of penicillin.

200000/ml opt. For penicillin, agar depths less than 5-6 mm. give sharply increasing size zones of inhibition, varying \propto concentration.

The assay value increases at agar depths considerably greater than the apparent radius of diffusion.

8.8 cm plates require 50 ml for 8 mm agar, which is required for uniform results.

Selvam, F E + H Wolter, Vetsch. Schwei. Naturf. Ges., 120: 181-2 1940.
Verschwinden eindringlicher Zellsaum v. Tefafix nach Zellkernbehandlung.

6. 10. 74 (1910) Method of counting

Paul Siteman, A. J. Med Techn
various ...

Begemann, H.W. Archives Néerlandaises des Sciences, 23: 367-72 (1887)
L'auxanographie, ou la méthode de l'hydrodiffusion dans la
gélatine appliquée aux recherches microbiologiques.

Add required supplement to the surface of an agar or gelatin pour plate
according requirements. e.g. yeast & phosphate [yeast is
more resistant than most bugs to killing under such conditions].
Also, double diffusion zones for residue giving "une ligne
lenticulaire opaque du couleur jaunâtre." Glucose + agar, etc.
as it's a sound inhibitor less easily demonstrable. Also suggests
dying the plate.

Points out that bacterial zone do not have to be known. Used large
plates for multiple effects.

Faith, J. + H.C. Boon, AAAS Research
Conference on Cancer, 1947, 129-138.

The time and site of origin of the leukemic
cell.

Malignant cell determined by bioassay - intravenous adrs. to scrotum.

⇒ 1 cell needed for transmission.

1. Young leukemic mice do not harbor by neophytes.

2. Some neophytes can be found before clinical leukemia.

3. Thyrectomy reduces incidence leukemia. (ca 60 to 10%). So
underfeeding. Splenectomy's effect. Does not influence transmissibility.
They have a general effect in inhibiting tumor growth.

4. Underfeeding reduced incidence from 65 to 10%. Also interferes with
transmission. May have leukemic cells by bioassay & evidence of leukemia
Rarely in bone marrow; probably not typical state.

5. Checked leukemogenesis. a. X-Radiation increases surv.

b. Used T₄ hybrids which do not develop spont.

Overlays in 90-100 days. contain neophytes a short time before
leukemia develops.

Earle, W.R., AAAS Cancer 1944, 139.

A summary of certain data on the production
of malignancy *in vitro*

Oedal, 3^f & RKBusch. J Bact 51: 791-2 (1946) The
biotin requirements of *Nocardioides sicca*

only Biotin required opt. .0001 μ/ml

Beygo - Teodoriq, R. + M. N. Nickelson, J. Bact. 51: 569 s (1946)
Recovery of biotin from cultures of acetone, butyl ale. bacteria.
Synthesis medium.

75-80% recovery. 15-20% in medium.
acid hydrolysis or papain-diastase are best methods.

Kleinenberg Nobel J Hyg 44:99 1945

jbl Bakst I 1940 (mix cultures)

JID 54:313.

~~Aldenoster~~ Z. Bakst ~~1940~~ symbiosis

J Bakst 30:301

Breen, FE + Fu Myhan 110 42:525-36 (1958).
42:545-

Lukenstein, HC + ML Snyder, J Bact 42: 653-64 (1941) The inhibition of the spreading growth of Proteus and other bacteria to permit the isolation of associated streptococci.

a) Fey's technique of pouring layered plate
1. Prevent spreading with a top layer

6% NaCl inhibits spreading but not growth markedly.
(probably cuts diffusion of water - as ind. by dye)
(probably not a good idea)

Hydile inhibits spreading at 10^{-4} but growth as well.

alcohol 5% inhibts spreading but not growth.

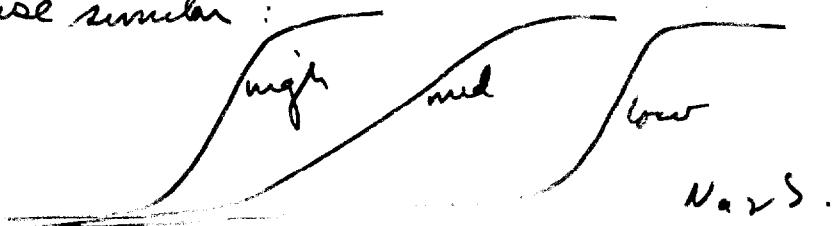
[Settling has proteus phages.]

Fey - BJEP 15: 456-7 (1932)

Burrows, W. J.I.D. 54:135- 1939 The nutritive requirements
of the Salmonellas.

Many strains require tryptophane. Can be tried. Tryptoph. conc.
does not affect rate, or final growth, but only lag. Replaceable by
lysine in one strain. Tryptophane assay increased after growth.

N₂S response similar:



N variations affected both rate + amount. Glucose was all or none.
not lag.

NH_4SO_4
 NaCl
 KH_2PO_4 .
glucose

high
drop. rates ~~lower~~ = low tryptophane - (selection?)

Demerec, M. CSH 9:145 (1949) Clustable genes in *Drosophila*.
see Demerec 1935.

Plough, H.H. (SH. 9:127 (1941) Spontaneous mutability in *Drosophila*

Goldschmidt, R. Biol Zent. 49: 437-48 (1929) Experimentelle Mutationen und Problem der sog. Parallelmutationen. Vers. am Drosophila

By heat-treatment of larvae, phenotypic sooty which had sooty were found.

"simultaneous somatic + germinal mutation," favored. !

Blechman, A. Biol Zbl. 48: 641-8 (1928) Einige fragende Worte zum Metathrioke-
griff.
(Hansson has it)

see Bauer. -

Delbrück, M. Biol Rev. 21:30 - 1946. Bacterial viruses or bacteriophages

Winge, O. CR Cytology 24:79-95 (1944) on segregation and mutation in yeast.

S. cerevisiae - only 1/2 spores survive. (lethal?)

S. uvarum - (single spore form) probably varying segregants