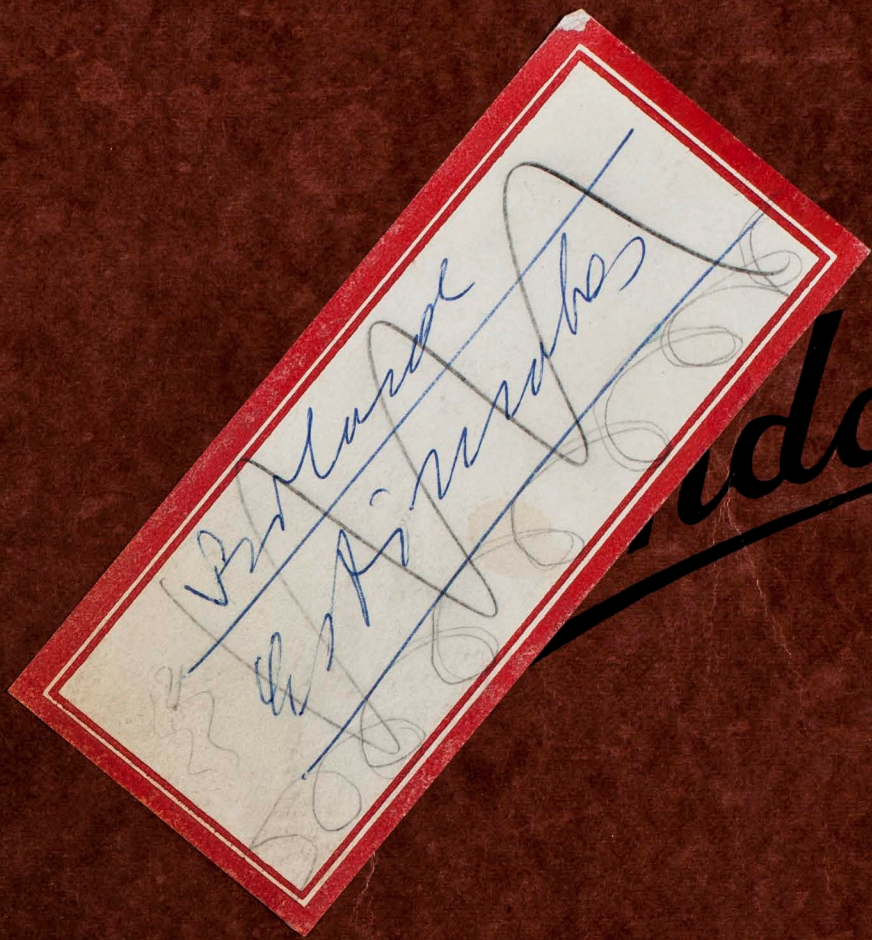


G 27



*Standard*

# COMPOSITION BOOK

NARROW RULED MARGINAL

SIZE 11 x 8½

No. P-2713



N. Schock, Gerontology Branch NIH  
~~Colby~~ Colby Hospital, Baltimore

Webb

167 Montclair Ave N.J.  
Tolgram 6-2159

Max Luffe Mm 2-6060

Hille Randam AC 2-6961

(10-2 Weeks)

1100 Sherman Denver

Public Steno Insent Plaza Mrs Renterman OL 4 2890  
To Nixon via Joe Rank via Herman Edelsburg  
Anti Inf. League 17th & RI.

Babky (Richarda Karamik OL 6-3609  
3 Books Hill Rd

Borkova Silver NIH Ext 2098 (3715)

Mrs Mann

Miss Loreu Jackson P-2444

May Flower

Dupont Circle Bldg

Morre Davis LU 4-7916

11/4/41

Mary Fisher / Mrs Albert D VU 6-7110  
405 Lexington Ave  
29 Beckman Pl  
N.Y. Post 25 Ward Br. Plaza P-1242

Alfred Wallenstein Plaza 30000 (N.Y.)

Brentice J. Rockefeller

Home 1335 N. Asher 325 N. Wells WM  
MOHank 4-0640 43390

Mrs. Stamp

Ganipet - 7-5541



X-ray

Hummer / Bone marrow

subcut 90

sensitivity increased by 2.5  
sens Wood, falls factor 5 for  
50 rep

— not possible to say anything  
about shoulder, —

Human V, V,

gives night kid movement  
and 1 gen ~~the~~ growth in absence  
of bromouracil gives great drop  
in ~~the~~ sensitivity.

~~But for this reason, the  
sensitivity of the  
bone marrow~~

V, V, lower curve, of 5 Bromo



X 150 / pm

Ant. found for  
Biochem Res H.

5 Bromo deoxy uridine

no detectable trace of thymine  
needed

Thymine analogue

incorporation of it into  
bacteria

Chloramphenicol in both does  
shuttles DNA

This does make more  
sensitive to U.V.

[X-ray data with Bachera  
Samuel Biller; Houston, Tex  
M.D. Anderson Hospital]

Bachera; U.V. slope increased  
10 fold and became  
single hit [from lag phase]

few in presence of compound  
1 to 4 generations

In phage T2 (double strand  
DNA) not ~~XXXX~~ sensitised but  
 $\Phi$  X-174 (Linschmeier) is sensitised.  
(single stranded)

Went to see Bachera - 9 years  
with Linschmeier



(SH)

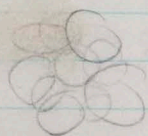
VATSLAV

SZYBALSKI

Technical Microbiology, Inst. Durrant  
Pop. Chem. Inst. Tech; Thwaff 1943  
Dr. (Czechoslovakia) " Durrant

{ V. V. Chirkin Prof. Inst. Chem  
Univ. of Copenhagen } 1947-49  
1950 Alt. Spring, Harbore  
1955 } Biol. Labor. }

~~Microbial~~ Microbial Genetics - Molecular Biology  
cell cultures



8 Azar In amine resistance  
same manner

spont. mut. rate  $4 \times 10^{-4}$  per gen



Progress of Bacteriophages  
DNA by a Russian Review  
Ladd S. Kelly Vol 2 (1957)

M

Moskva

Ryshkov

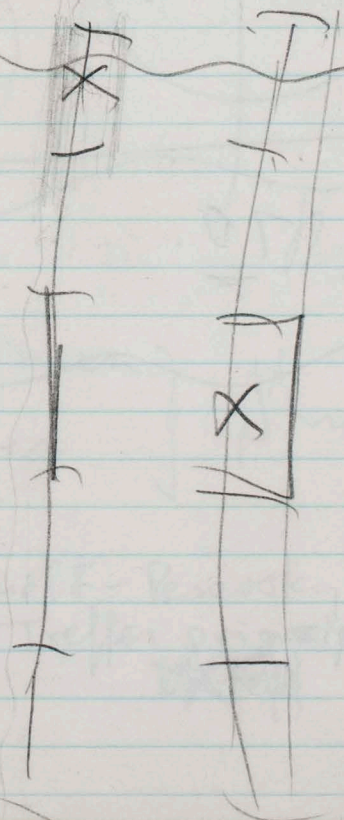
Institute of Microbiology - Acad. Sc.

Maisel

Alikhanian S. Y. " of Antibiotics  
Inst. of Antibiotics

Quinn 405

Fluoro-Desoxy-uridine  
Inhibits Mycine synthesis



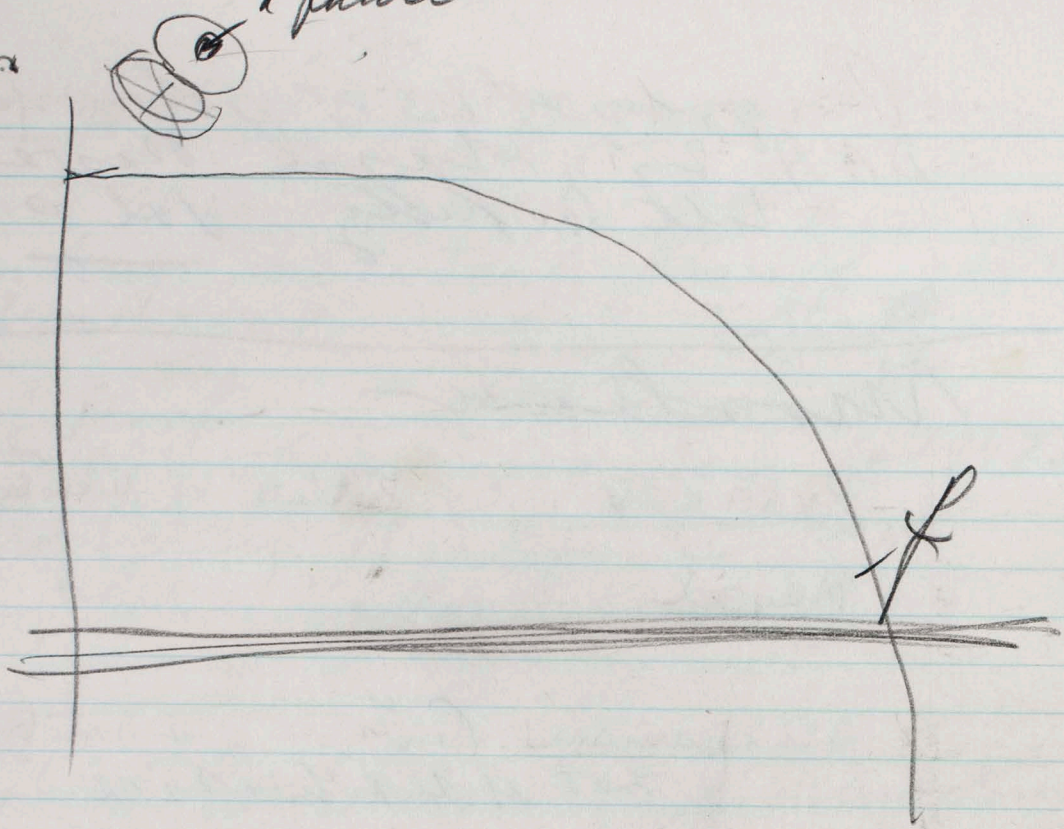
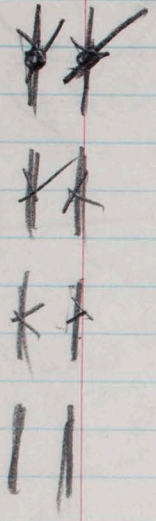
Kozinski (34) MD  
~~not a prof.~~  
Senior Fellowship  
New Culture Bldg  
Sept 1st



6000 ad

3000 - neys

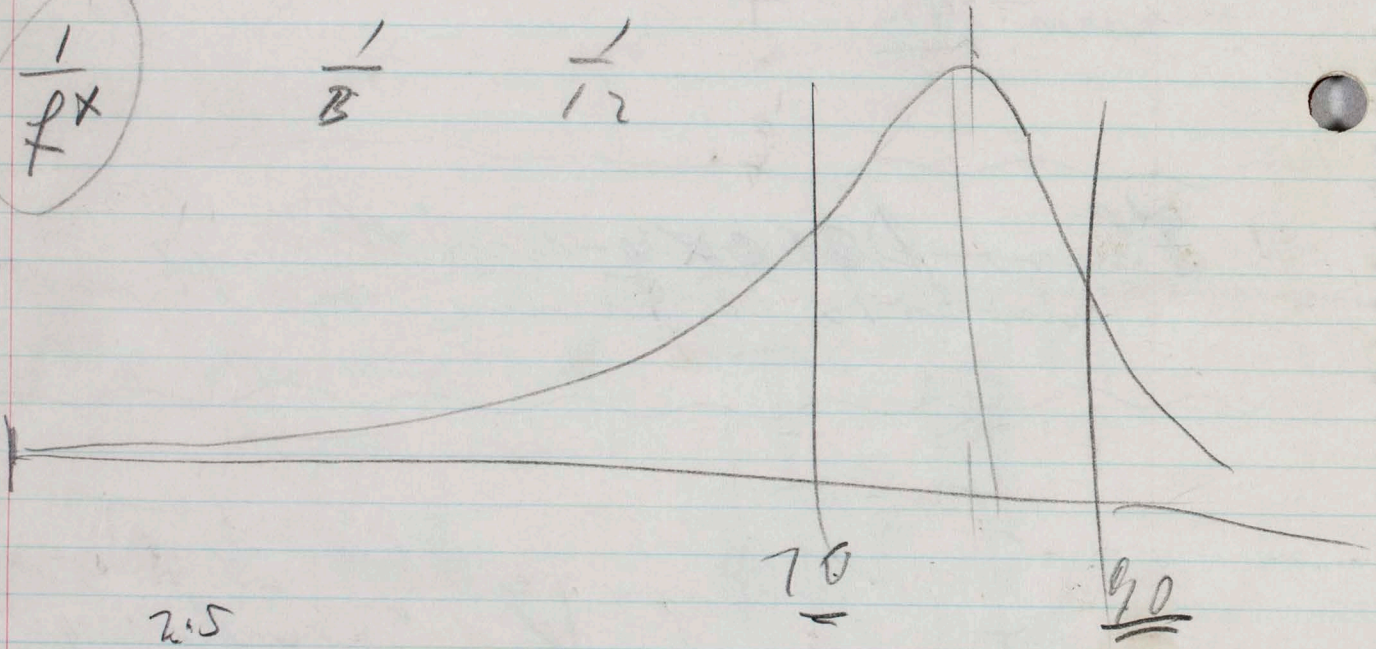
1 fault



$\frac{1}{fx}$

$\frac{1}{B}$

$\frac{1}{12}$



2.5

70

90

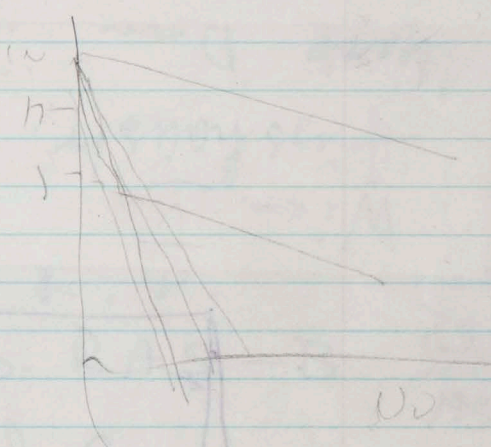
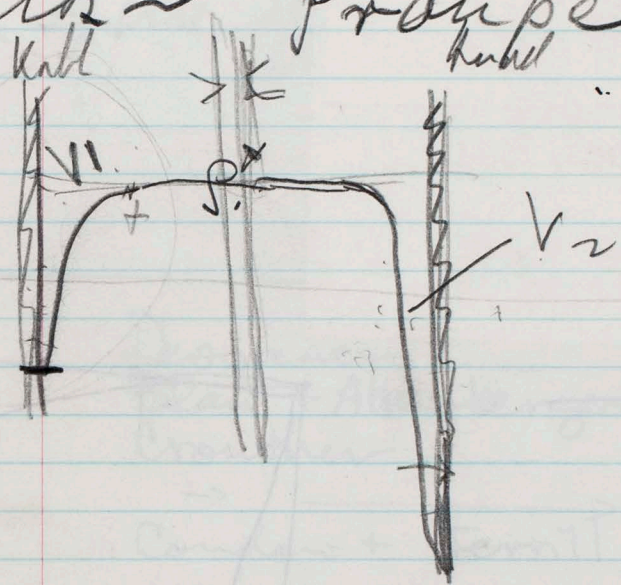


(117-)

Elkind, Luckhart  
[Harry Eagle]

2788

Salt ~ Praupe



$$\Pi_1 = W - V_1$$
$$\Pi_2 (W - V_2)$$

$V_2 - V_1$

$$e^{+(W - V_{\text{var}})}$$

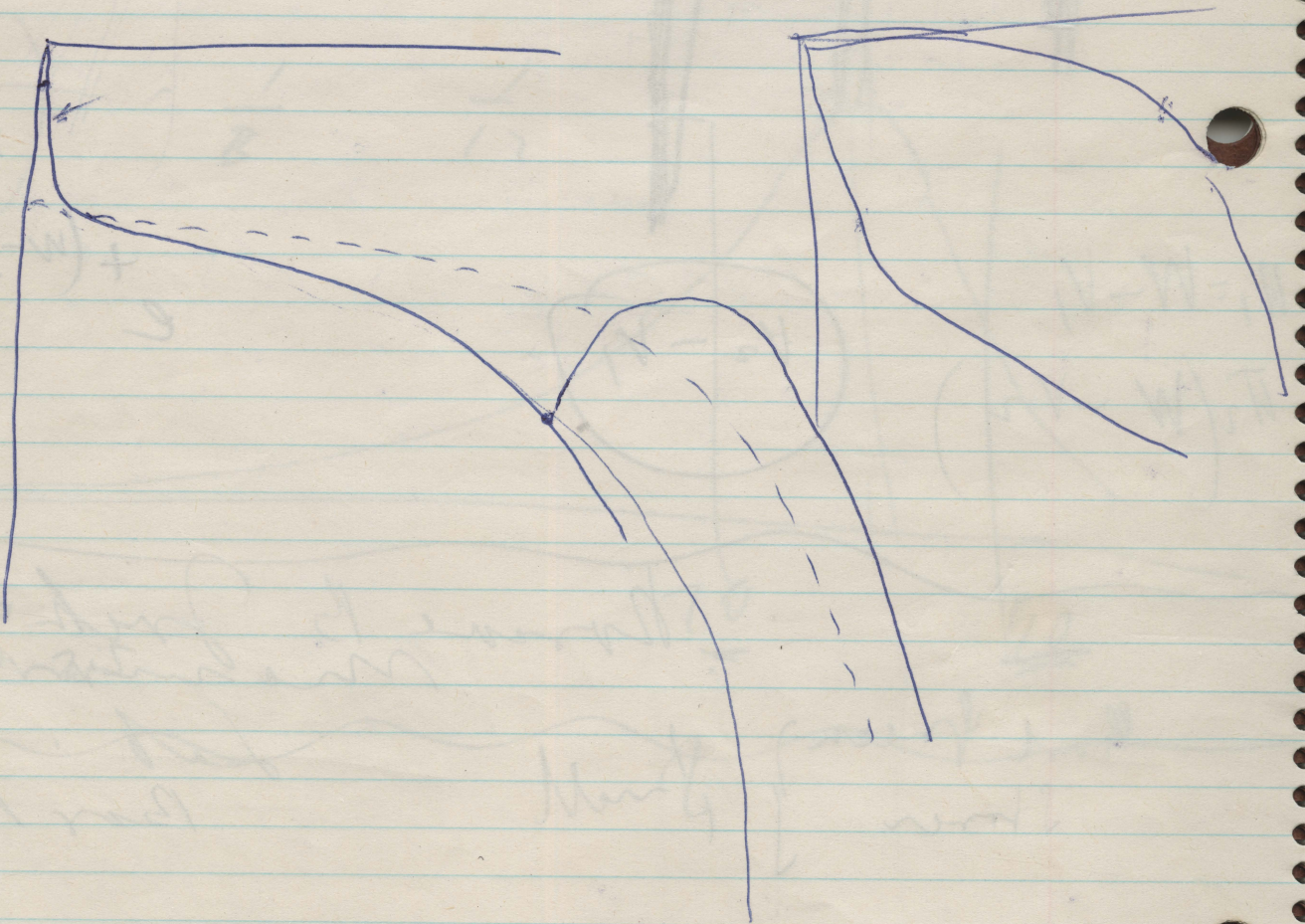
Roscoe B. Jackson

and Green } Small  
Stoner

Lab.  
Bar Harbor  
Maine

Timmelf-Ressovsky & Zimmer  
Trefferprinzip in Biologie  
Biophysik Vol I  
Leipzig 1947





Topographic map of the  
Tennessee River in  
Tennessee  
1945



THE ROCKEFELLER INSTITUTE

NEW YORK 21, NEW YORK

1 May 1959

Dear Dr. Szilard -

Here is 1/6

reference I promised you:

Congenital Malformations.

A study of parental characteristics  
with special reference to the  
reproductive process

by

Douglas P. Murphy

Philadelphia, University of Pennsylvania  
Press, 1940

Sincerely

George M. Corner



Wien IV  
Grüsshauser. 23.

Marie Domes Lock 47916

$630$   
 $530 \text{ m} - 6 \text{ m}$

Males ~~all~~  
all 31  
11.4  
17 ( $> 60$ )  
4.4  
17 ( $> 6$ )  
17  
6.3 years  
19.6 years

11.4 years  
Females  
33p 14 ( $> 60$ )  
11.14 7.4 years  
17.9  
55 17 ( $> 60$ )  
17.9 3.7 years



The Brutality of the Feskes  
 N.Y. Academy of Sciences | *Annals*  
 Val 55 (4) p 543 742 at

Parental age and descent  
 of the offspring Val 57 (5)  
 p 451-614

Dessauer  
 Blau + Attenberger  
 Crowther

Z. F. P.  
 Pro RAS-B

(22  
 22  
 23  
 26  
 1934

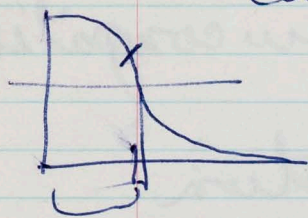
→  
 Condon + Ternit

Am. J. Can. -

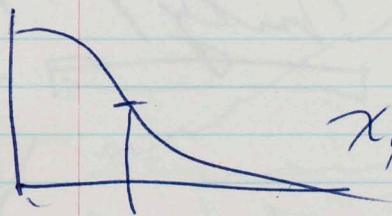
Curies

17 CRAS - Paris -

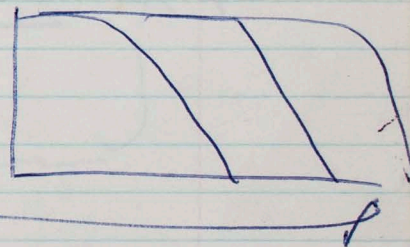
1929



$$X \frac{d\epsilon}{dx} = \phi(f)$$



$$X_{1/2} \frac{d\epsilon}{dx} = \phi(f)$$



Timeeffe - Resv. +

Zimmer B. Zentral Blatt



Turner  
[Ford]

Mechanism of  
Antibody formation

no. of per  
unit c.

Genl. helpen such as  
aging, protein synthesis  
Abx form — tissue incompatibility  
adaptive enzyme formation

$17 \pm 2000$

(50/ans)

July 1

Nov 5  
~~trans~~



John  
Bittner

Snell says:

(N)

inv. of Minnesota

Dr. Alvin H. Russell

Inter-rural

Miss Joan Staats

John Biggers

Willis Litners

Wistare

Can. loc. 3241

Mary Allen (Marshall) secretary

D

a

N

Dr. Chang

Worsher Farm  
Worsher Mrs  
Worshes



Dr. Meredith Runner  
 named by Carl Hordmann  
 Jackson Memorial  
 Lab  
 Bor Harbor  
 Maine



Barbara Sieber  
 2098

Woods Hole Beaches

my. malformabium [Pulva] the actual number

N. S. F.

place  
 by Captain

full oblique view

25 in/mile x 40

1000 lines

3 - 3000

- 2000

20,000

| 100,000 |

15%

~~overhead~~  
 And not

10 original  
 signed - in  
 19 copies

Month, by Hammer, Irving (late), N. West.

David Grass, Paul Alberto, Benoit Akelone

Gerard (Mrs) Ben. Harv. & Michael Purdue

Manuel Morales, Vincent Dethier  
 Ed Kolawick John Hupke / Univ. of Pennsylv.



Mr Mac Darnell Science vol 21  
2105, 418 1935

C. G Mac Darnell & Erva Allen

Anat. Record vol 41

NO 3 p. 267 - 272 Febr 1929

(Am. / Zool. Nat. NO 28 1928/29)

Hankins

$$A_{40} = 0.12$$

$$\sigma_{40} = \frac{0.12}{1.13}$$

$$\sigma_{40}^2 = \frac{65.17}{1.28} = \underline{58} - 9 = \underline{49}$$

$$2 \times 49 = 98$$

~~HA~~

E.C. Mac Darnell probes further

HATAI S. Am. Journ. Anat.

Mac Darnell E.C. & E.M. Lord vol 15 p. 87

1925 Anat. Rec. vol 31 p 131!

1925 " " vol 31 p 342

1927 Arch. Ent. Mechan.

Bd 109 S. 549, Bd

Bd 110 S 427

Smith P.E. and E.T. Gipe

1297 Am Journ Anat

vol 40 p 159

12 copies at

Hummingbird  
p. 1921  
p. 1921  
p. 1921



Cons. Found. Lex-26110

Dr. John MacLeod  
Cornell Univ. Med. College  
Ass. Prof. Anat

TRaf9-9000 \*  
Re 7-2833

at  
MacLeod's Gold  
Journal of Fort. and Ser.  
1951 onward

117 Anat. Month p 93-114 - 1953

Fekete  
I 109  
Bldg 6

Dr. Derivinger Ext 2324  
(Vlahakis)

down to 1 or 2 after  
15 months. -

Bldg 6  
109

L.C. Strong Roswell Park  
Mem. Inst.  
Springville N.Y.



Reference X-ray on mouse  
threshold X-ray identification of Ovary  
Publ. Rungt and Juan Wolff

tert. floor p. 428-437 Vol 8  
Literature on p 436 No 5 1957  
to 437

~~Tert. floor~~

Lundman B. Shuttles. U.D.

tert floor p. 561-572 Vol 7 (No 6) 1956

see also: Stanton E.R.

AM. J. Obst & Gynec 71 270 1956

#1 S.

Christ. Freese p 338 Vol 7 (No 1) / 56

FPS

11

p 338 Vol 1

1950

4

Mr & p S

Mme Guel, Publ of Mc Lane

p. 112 Vol 6 (No 2) 1955

Lawrence Knapp



to Dörnyei

DBA inbred  
letter (states at 2 months  
growing 20 days - say 1 month)

(H)

hybrid LAF<sub>1</sub> (257L x A)  
lives  
30 months

The functions of the Mouse

Hans Fränkel (1952)

see page 9

look up Gates W. H. Anat. Rec 29 p 143-193

Fehete, Elisabeth Anat. Rec. Vol 117 p. 93-114  
up to 14 months no  
decrease in no of corp. lutea  
1953

Books: G. D. Snell

Principles of the Lab. Mouse 1941

5 estrus ~~of lateral between~~ ~~less than week~~  
cycle. (4 days in rats)

Rats ~~DBA~~ ~~George Jay~~ ~~Bo~~ ~~now Dr. Arnold Bailey~~  
Hamsters ~~George Jay~~ ~~Pringle Pigs~~ ~~Rabbits~~ ~~N.I.H.~~

Code 4551 Rat 215

Ext 3575



$$\int \frac{dx}{1+e^x} = x - \ln(1+e^x) = x - \ln \frac{1+e^x}{e^x} \cdot e^x$$

$$\frac{dx}{\ln e^x} \approx x - x - \ln = + \ln \frac{e^x}{1+e^x}$$

$$\int \frac{dx}{a+be^{px}} = -\frac{1}{ap} \ln \frac{a+be^{px}}{e^{px}}$$

$$= \frac{1}{ap} \ln \frac{e^{px}}{a+be^{px}}$$

$$= \frac{1}{ap} \ln \frac{1}{ae^{-px}+b}$$

$$\int_{x_0}^x = \frac{1}{ap} \ln \frac{ae^{-px_0}+b}{ae^{-px}+b}$$

$$a=1.5 \quad b=\frac{1}{12}$$

12

$$\frac{12}{1.5} \ln \frac{1.5+0.36}{1.5+0.36}$$

$$\frac{0.36}{7.5}$$

$$0.435 \approx 0.4$$

$$\ln \frac{1.86}{0.4} = \ln 4.65$$

$$\int = \frac{12}{1.5} \ln 4.65 = 1.5$$

$$\frac{1}{4.65} = 0.225$$

$$\frac{12}{1.5} \ln \frac{a+b}{b}$$

probab of conception over  
month  
interval is  $\frac{1}{4}$  waiting time?

assume  $b$  = mean waiting time =

0.36  
year  
see just in  
moment

$$b = \frac{1}{4} \text{ year}$$

$$b=1$$

$$\ln \frac{a+b}{b} = \ln \frac{1.5+0.36}{0.36}$$

$$= \ln \frac{1.86}{0.36} = \ln 5.2$$

If  $\frac{1}{2}$  get pregnant in  $\Delta t$  mean is  $\frac{1}{2}$

$$\frac{1}{2} \Delta t + \frac{1}{4} \Delta t + \frac{1}{8} \Delta t$$

$$\int \frac{x}{2x}$$

$$1.65$$



Campanulae!

M

~~Waiting period at natural selection~~

$$\int 12 + A e^{\frac{t-15}{12}}$$

~~frequency in 1 year in natural conditions~~

$$\Delta t = 1 + A e^{\frac{t-15}{12}}$$

$$\frac{1}{\Delta t} = \frac{1}{1 + A e^{\frac{t-15}{12}}}$$

$$\Delta t = \int_{15}^T (1 + A e^{\frac{t-15}{12}}) dt = T - 15 + 12A(e^{\frac{T-15}{12}} - 1)$$

$$\text{number of children} = \frac{T-15}{\Delta t}$$

$$\text{number of children} = \frac{T-15}{T-15 + 12(e^{\frac{T-15}{12}} - 1)}$$

$$\int \frac{dx}{1+e^x} = x - \ln(1+e^x) = \ln \frac{e^x}{1+e^x}$$

$$\int \frac{dx}{a + b e^{px}} = \frac{x}{a} - \frac{1}{ap} \ln(a + b e^{px})$$

for large x

$$\frac{1}{ap} \ln(a + b e^{px}) \approx \frac{1}{ap} \ln(b e^{px})$$

for large px

$$= \frac{1}{ap} \left\{ \ln(1 + \frac{a}{b e^{px}}) + \ln b e^{px} \right\}$$

$$\approx \frac{1}{ap} \frac{a}{b e^{px}} + \frac{\ln b}{ap} + \frac{x}{a}$$

$$\int = -\frac{\ln b}{ap} - \frac{1}{b p e^{px}}$$



Capestrangen : Sept 14

Ephraim

Westergaard [inst. of genetics]

Madaloe O. Maaloe [

(Francis Creek)

Cambr July 6-9 / 54  
c/o J.M. ~~Wynn~~ Wynn  
Physiological Laboratory  
Cambridge  
England



NIM

Kane

4

25

100

4000 Seca. Service

Transit 7500

Cambridge

for Underwater Biology

HRC Unit, Cambridge Lab. Cam

F.H.C. Clark

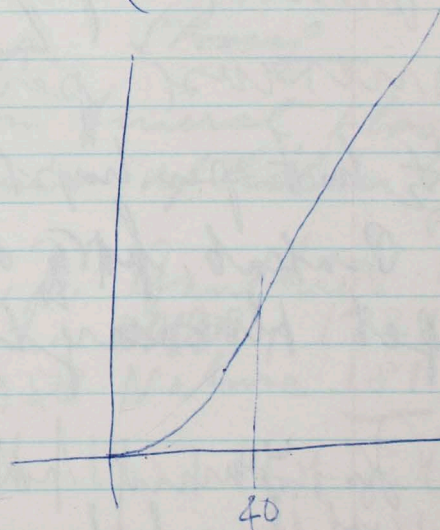
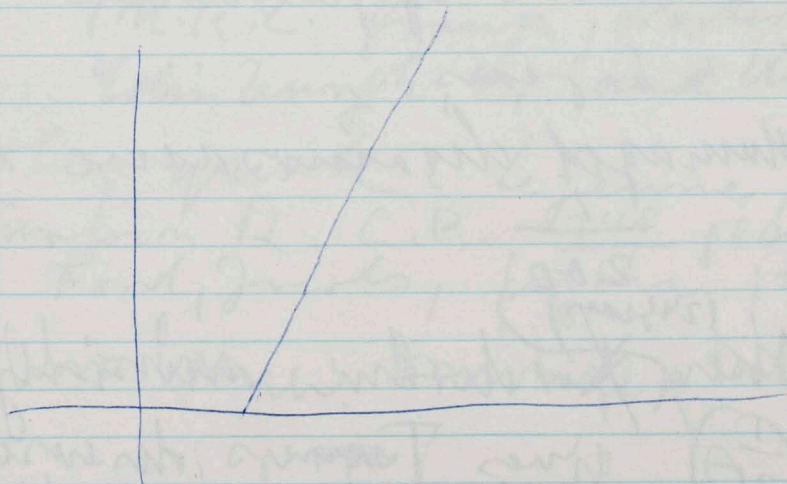
Sidney Brenner

Brenner

Hfr (Rodee Jacob Monod).

P<sub>1</sub>(Lac) defective

Lac :  $\beta$  galactosidase.





Turner

C. E. Ford K. W. Jones

MRC. Unit A E R E, Harwell, Berks

P. E. Polani

J. C. de Almeida } Guy's Hospital  
J. H. Briggs }

Formula X O

Y missing, X derived from mother

Turner

M. Fraccaro

K. Kaiser

P. J. Lindsten

Inst. of Med. Gen.

Univ. of Uppsala and

Dept. of Paediatrics, Dept. Central  
Hospital, Eskilstuna, Sweden

approx 1% fetal death  
increase per 6 years of mother's age  
 $\frac{1}{2}$  bit per hist. in 6 years

Probab. ~~partly~~ damaged chromosome to  
get through  $\frac{1}{200}$

In young father (24 yrs) - chrom missing  
with probab.  $\left(\frac{1}{25}\right)$  gives Turner disease!

5000

check ~~source~~ for current  
holder



Rock

H

10,000 for prot. x 2000 pieces

5% RNA

$$= 2 \cdot 10^6 \text{ (7000) makes } \boxed{18000 \text{ Prot.}} \quad \frac{40 \times 10^6}{20} =$$

$$\text{Ratio} = \frac{2 \cdot 10^6}{2 \times 10^4} = 100$$

$$\frac{7000}{200} = 35$$

Insert Apr 4 Vol I 1959 p. 710

Mangalis m

Patricia A. Jenkins  
W. M. Cant Brown

A. G. Baike  
J. A. Strong

M. R. C. Group, Western General Hosp.,  
Edinburgh, 4, and Univ of Edin Gph.

They quote: Lejeune, J. Gauthier M.

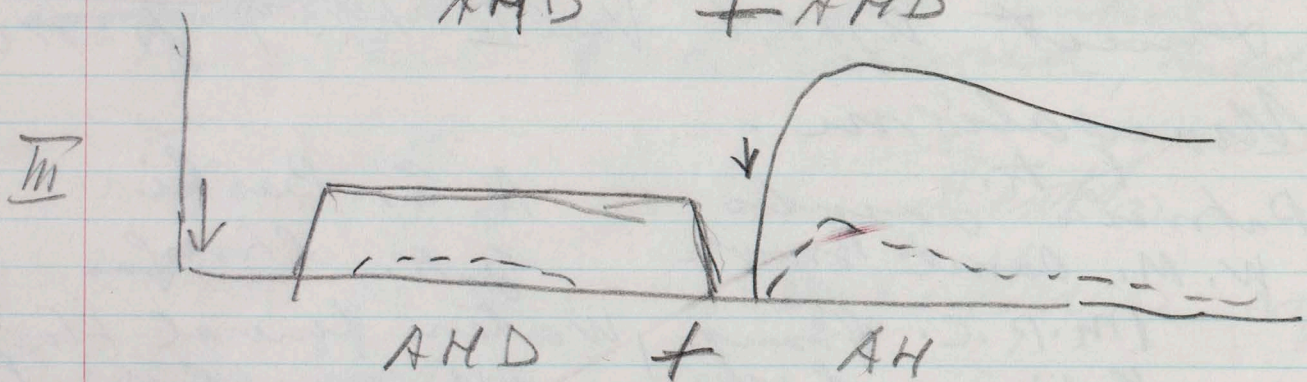
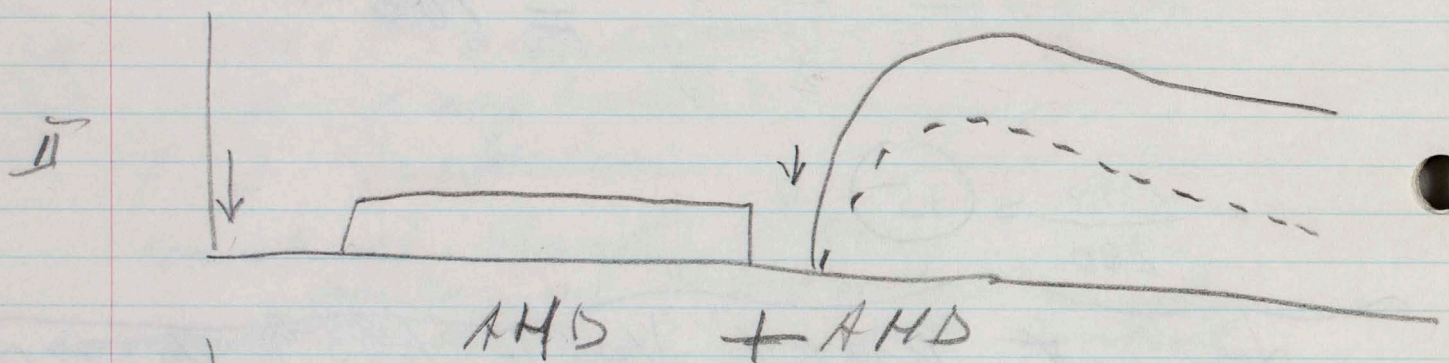
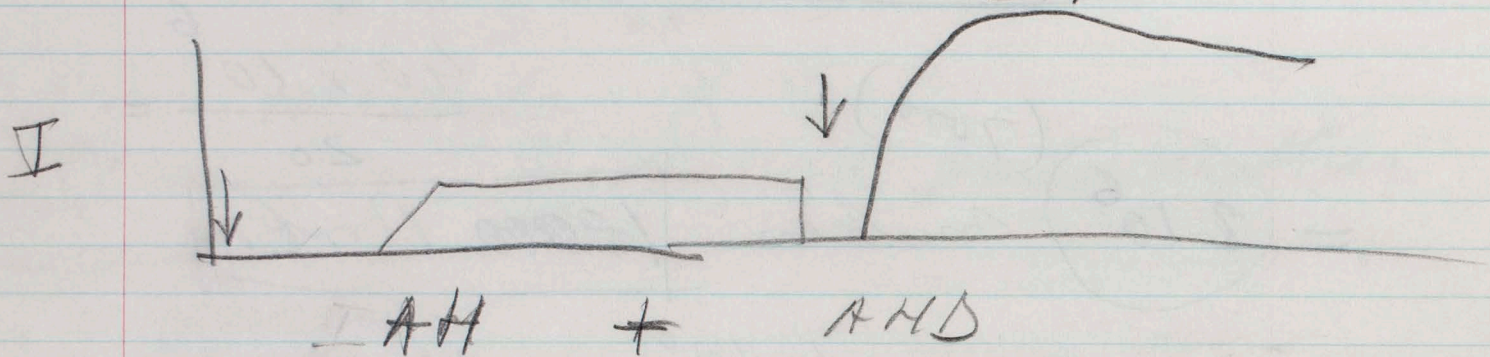
J. Turpin R. C. R. 248 p 602. ~~1958~~ p 1721, 1959  
Ford, Jacobs, Lyth 1958 Nature 181 p. 1565

Also lunch: Annals p Dull 1457 Brit. J. Cancer

Hospital Trousseau, Paris [Jerome Lejeune  
Marthe Gauthier & Raymond Turpin]



Jean Marie Aubert  
 C.R. p. 1939 Vol 243<sup>(2)</sup> 1956  
 Analyses: Brown & Maurer  
 J. Immunol. 74 p 418, 1955





Antibodies

H

Concave exp.

pre-immunize Rabbit with soy chick  
protein, couple Hapten to chick  
determine antibodies to ~~chick~~  
Hapt. | Control: no pre-immun.  
with Chick. ~

After control; ystine Rabbit  
paralytic, antibodies to chick; then

Inject; Hapten coupled to chick

Theory says <sup>(first)</sup> the Injection  
of antibody has two effects

1.) partial immune paralysis

2.) maturation

~~the antibody~~ "Paralysis" lasts 4 weeks