

February 1958 - Through January 1959

RESEARCH GRANTS:

B {	[REDACTED]	\$36,800.00	
	Patient Hospitalization	1,000.00	\$37,800.00
	[REDACTED]		2,950.00
	[REDACTED]		<u>3,466.66</u> 44,216.6

SALARIES & FEES AND SOCIAL SECURITY:

Salaries and Fees	15,478.90	
Social Security	<u>307.23</u>	15,786.1

SUPPLIES AND SERVICES:

Special Chemicals:

B	[REDACTED]	\$ 650.00	
	[REDACTED]	217.80	
	[REDACTED]	1,355.68	
	[REDACTED]	<u>2,037.52</u>	4,261.00
B	[REDACTED]	918.30	
	[REDACTED]	<u>27.98</u>	946.28 5,207.28

TOTAL EXPENDITURES

\$ 65,210.3

5 2 0 7 2 8 C  
 1 5 7 8 6 1 3  
 4 4 2 1 6 6 6  
 . 0 0  
 . 0 0  
 6 5 2 1 0 0 7 #

February 1958 - Through January 1959

RESEARCH GRANTS:

B {	[REDACTED]	\$36,800.00	
	[REDACTED] Patient Hospitalization	1,000.00	\$37,800.00
	[REDACTED]		2,950.00
	[REDACTED]		<u>3,466.66</u> 34,216.66

SALARIES & FEES AND SOCIAL SECURITY:

Salaries and Fees		15,478.90	
Social Security		<u>307.23</u>	15,786.13

SUPPLIES AND SERVICES:

Special Chemicals:

B {	[REDACTED]	6 650.00	
	[REDACTED]	217.80	
	[REDACTED]	1,355.68	
	[REDACTED]	<u>2,037.52</u>	4,261.00
	[REDACTED]	918.30	
[REDACTED]	<u>27.98</u>	<u>546.28</u>	5,207.28

TOTAL EXPENDITURES

\$ 65,210.00



B

E



E



FOR DEPOS

December 10 1968 Nov

1566

E

B

85-3-68

light blue & black & blue & yellow & red

28 Dollars

E

B

B

special chemical

C

FOR DEPOSIT ONLY

B

E

E



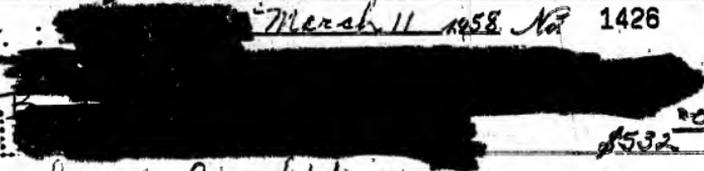
0720  
0000

B

✓

E

March 11 1958 No 1426



Pay to the order of

\$532.<sup>00</sup>

Five hundred and thirty-two

00 Dollars



B



D. B. ...

E

C

SECRET

E

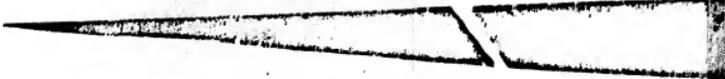


FOR DEPOSIT TO AL

E



B



SECRET



E

B

E

1591

E



B

C



E [Redacted] *November 1958* No. 1546 E

B [Redacted]

*1/4* B [Redacted] \$160.<sup>59</sup>  
One Hundred [Redacted] *59* Dollars

*at Phoenix* E C [Redacted] AUTHORIZED SIGNATURE

B

E

PAY TO THE ORDER OF [Redacted]

[Redacted]

B  
[Redacted]

[Redacted]  
[Redacted]

January 1954 No. 1591

Pay to the order of

\$134<sup>10</sup>/<sub>100</sub>

Three hundred and thirty-nine and 10/100 Dollars

spec. chemical

[Redacted]  
C

PRINTED SIGNATURE

PAY TO THE ORDER OF

B  
[Redacted]

[Redacted]  
[Redacted]

E

[Redacted]

E

B  
[Redacted]

E [Redacted] February 28, 1952 No. 1419

Pay to the order of

Fifty-two

91  
of 52

26 Dollars

Invoices 992059, 990756  
Special Chemicals

AUTHORIZED SIGNATURE

PAY TO THE ORDER OF

B  
[Redacted]

E  
[Redacted]

B

CA

E

PAY TO THE ORDER OF



E

B

E

Master Card No

1467

E

*Pay to the order of*

\$1684<sup>96</sup>

One *thousand six hundred and eighty-four*

*96* Dollars

Special Chemicals

D  
C

AUTHORIZED SIGNATURE

1455

May 13 1958 No.

B

E

The B  
Reference  
Library

650.00

75 Dollars

hundred & fifty  
Special Chemicals

B

C

AUTHORIZED SIGNATURE

B

E

E

FOR DEPOSIT ONLY



February 28 1958 No. [redacted] E  
 [redacted] E [redacted] E  
 [redacted] C [redacted] 74  
 \$ 233  
 Two hundred thirty three  
 dollars  
 supplies E [redacted] B

C [redacted] E [redacted]  
 [redacted] E  
 [redacted]

FOR DEPOSIT ONLY  
TO ACCOUNT OF

**[REDACTED]**

E

E

**[REDACTED]**

0100  
1000

B

Pay to the order of

**[REDACTED]** July 23 1958 **[REDACTED]**

E

**[REDACTED]**

E

E

**[REDACTED]**

C

\$ 228.99

Twenty-eight

Ill. Dollars

Supplies

**[REDACTED]**

UNITED STATES

H

46/2

B

October 9 1958 No

E

E E

\$201.46

Pay to the order of

deduction

466 Dollars

Supplies

B

FOR DEPOSIT ONLY TO ACCOUNT OF

C

E

E

OCT 24 1958

[REDACTED] No. [REDACTED] E  
 [REDACTED] E  
 [REDACTED] 27 78  
 [REDACTED] 78  
 [REDACTED] Dollars  
 Twenty  
 Supplies  
 B C

FOR USE ONLY

C

[REDACTED]  
 [REDACTED] 85% 1. NNN  
 [REDACTED]

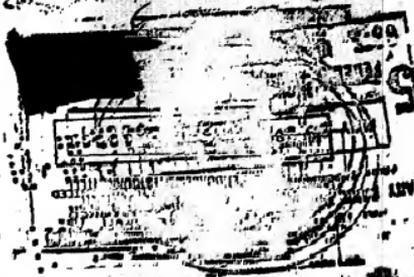
E



4-3

B  
FOR DEPOSIT ONLY  
1958

CH-1



Washington, D.C. 20540

1958 No 1466

(D)

Pay to the order of

Research Foundation

\$1,735.00

One thousand

Seven hundred and thirty five and no/100

00/100

Salpy Grant

EDITION OF 1958



45-3

RECEIVED PAYMENTS  
 DEPARTMENT OF CLEARING HOUSE

MAR - 5 1958

MAR 8 5 58 PM '58

ANY BANK, BUSINESS OR TRUST CO.

1958



Washington, D.C. February 28, 1958 No 1411

Pay to the order of [redacted] \$500.00

Five hundred and 00/100

Five hundred Dollars

N. P.

Reverse



45-3  
1126



DAY TO THE ORDER OF

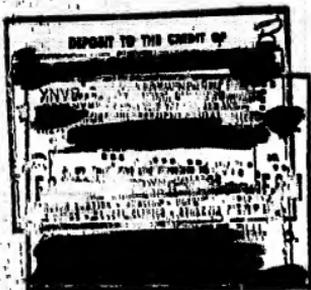
C. January 7 1952

\$4,000.00

Four thousand

00 DOLLARS

For Research Pathology Dept.



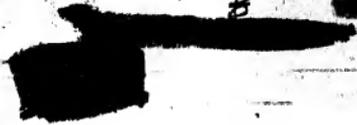




100  
100



6



8



6







Callahan



Callahan

Callahan

B

Washington, D.C. June 8 1958 1475

Pay to the order of *[Redacted]* \$ 5,000.00

Five thousand *[Redacted]* 00/100 Dollars

Grant - Pathology Dept. *[Redacted]*

4-3

Washington, D.C. December 10 1950 No. 1000

R

[REDACTED]

[REDACTED]

*Pay to the order of*

[REDACTED]

School

\$ 1,000.00

thousand

N. D.

Dollars

Special

AUTHORIZED SIGNATURE

Pay to the order of

[REDACTED]

DEC 10 1950

THE BANK OF AMERICA AND TRUST CO. OF NORTH CAROLINA

ANY BANK, BANKER OR TRUST CO. WILL CASH THIS CHECK

Receipt No. 7 3411

[REDACTED]

4-3

DEPOSIT SLIP FEBRUARY 27 1958 No 1530

Pay to the order of University

\$2,950.00

Two thousand nine hundred and fifty Dollars

Reginald Grant

FOR DEPOSIT ONLY TO THE CREDIT OF

[Redacted area]







C

[Redacted]

E

[Redacted]

B

[Redacted]

Pay to the order of

Five hundred [Redacted]

Special Research Project

E

5500

[Redacted]

B-



*Pay letter*

*2000.00*  
*1000.00*  
*1000.00*

*Dep of*

*1000.00*  
*1000.00*  
*1000.00*

*Professional Services*

B

B

[Redacted]

E

RECEIVED

1  
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4  
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6  
7  
8  
9  
0  
+  
-  
/

[Redacted]

[Redacted]

E

E



66666 82.91 NAR



0 1 2 3 4 5 6 7 8 9  
0 1 2 3 4 5 6 7 8 9

C

June 1958 NR



- C 600 00

hundred

880 Dollars

D-164 Studies

B

B



(C)

(E)

(E)

[Redacted vertical text]

[Redacted horizontal text]



(C)

[Redacted horizontal text]

December 31, 1958 No. [Redacted]

For the [Redacted]

One [Redacted] [Redacted]

Consultant

(C) [Redacted] (A)

(C) \$100.00

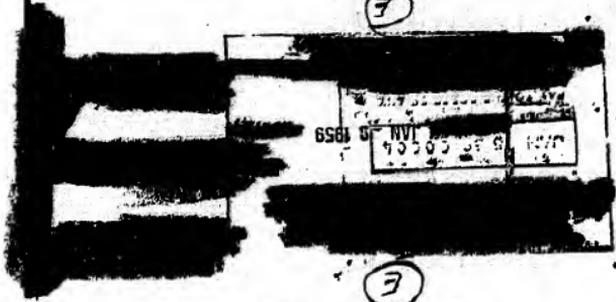
00 Dollars

(C) [Redacted signature area]

AUTHORIZED SIGNATURE

(2)

(7)



(3)

(5)

December 31, 1958 No. [redacted] (E) (E)

*Pay to the order of*

*Five hundred & eight* (C) *\$208.87*

*Salary* (B) (C) *47 Dollars*

PRINTED SIGNATURE

(E)

(C)

(H)

[Redacted vertical text]

[Redacted irregular shape]

[Redacted rectangular area containing a stamp]

0000000000000000

(A)

[Redacted vertical text]

[Redacted line of text]

Handwritten text: *Handwritten text*

(C)

[Redacted line of text]

(E)

(E)

[Redacted line of text]

(C)

[Redacted line of text]

(L)

(B)

[Redacted line of text]

X

(C)

(A)

AUTHORIZED SIGNATURE

December 22 1958 No. [redacted] (E)

Pay to the order of [redacted] (E)

Cl. [redacted] (C)

\$100.00  
100 Dollars

100.00  
Xmas Bonus

(B)  
(A)  
(H)

AUTHORIZED SIGNATURE

[redacted]  
[redacted]  
[redacted]  
[redacted]

1234567890

(E)

455

December 22, 1958 No. [redacted]

(E)

(E)

(E)

\$250<sup>00</sup>

(C)

Two hundred and fifty

00 Dollars

25000<sup>00</sup>

(C)

(C)

James Bonnes

AUTHORIZED SIGNATURE

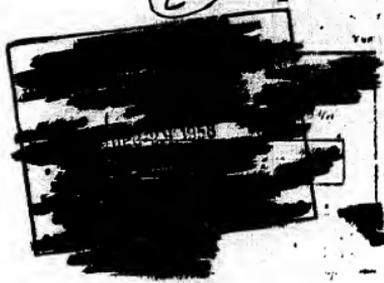
(E)

(E)

(C)

(C)

(E)



(B)

*De... ..* *December 1958 No 7* (E)

*...* (E)

*...* (E)

*...* (C) \$100.00

*One hundred ...*

*Xmas Bonus* (B) (C) *...* (E)

REGISTERED BUSINESS

(H)

(B)

December 22 1958 No.

(E)

(E)

Pay to the order of

(C)

\$50.00

Feltin

00 Dollars

Xmas Bonus

50000000

(E)

(C)

(C)

(E)

(E)



(C)

(E)

(E)

DEC 24 1959

(C)

December 22, 1959 No. [redacted]

(E)

(E)

*Do not  
laugh  
at me*

(C)

Page 27

*... hundred and eight*

*... Dollars*

*Xmas money*

(B)

(C)

AUTHORIZED SIGNATURE

(C)

(E)

(E)

[REDACTED]

RECEIVED  
AUG 25 1954

(B)

(E)

(E)

(C)

(E)

(B)

(A)

[REDACTED]

W. J. ...  
J. S. ...

APPROVED SIGNATURE

	1	5	0	30	✓
	1	6	8	10	✓
	2	0	8	35	✓
	2	9	7	50	✓
	2	0	8	35	✓
	1	0	0	00	✓
				00	
				00	
	9	3	2	50	#
	<u>1278.00</u>				
	1052.60				

January 30 1959 No [redacted]

Pay to the order of

One hundred and fifty



\$150<sup>30</sup>

100 Dollars

B

B

C

E

POST OFFICE BOX 1000  
NEW YORK, N.Y. 10108

E

January 30 1959. 1/2

Pay to the order of

One hundred and eighty eight

- C

\$168<sup>10</sup>

100 Dollars

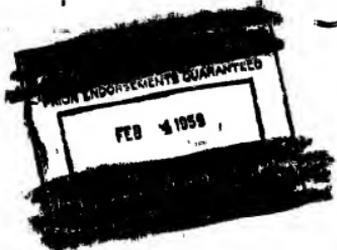
Selery

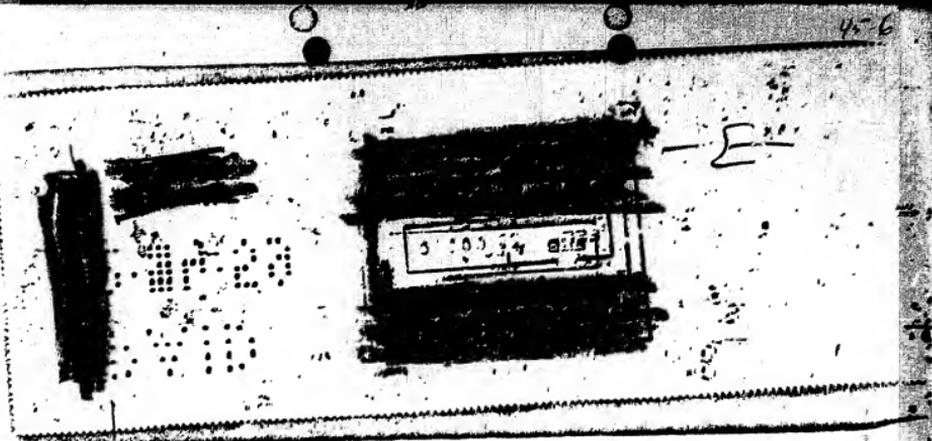
B

B

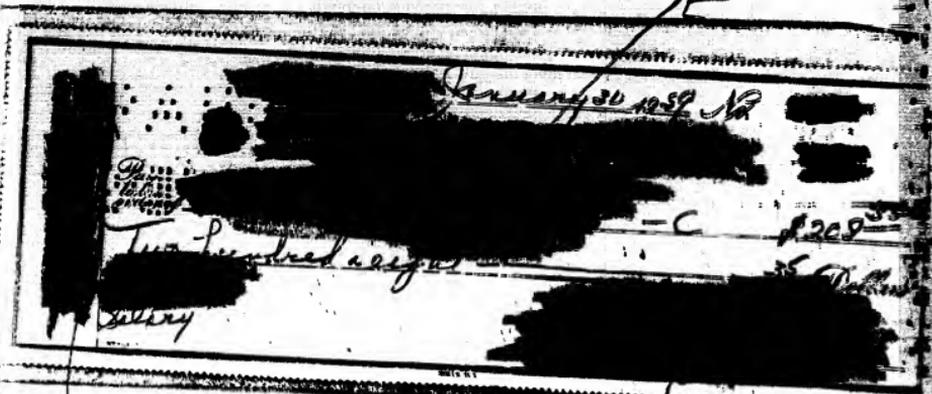
- C

- E





C



B

B

E

March 30, 1959 No

[Redacted]

[Redacted]

Copy  
2.00

[Redacted]

50  
97  
100 Dollars

154 [Redacted]

[Redacted]

Salary

B

B

E

C

[Redacted]

[Redacted]

1000 OF 1000

[Redacted]



E

E

Pay to the order of

\$100.00

One hundred

Dollars

Salary

B

B

TO: MARCUS ROSS No



Pay to the order of

\$120<sup>00</sup>

One hundred and twenty

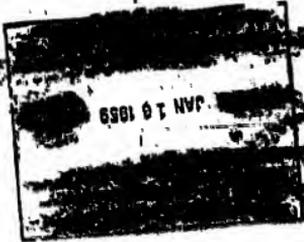
00 Dollars

postdatory

B

B

E



C

45-7

1	0	0	0	0	0	0	U
2	0	0	0	0	0	0	U
2	2	0	0	0	0	0	U
1	5	1	7	7	5	3	U
1	0	0	0	0	0	0	U
9	3	6	3	4	0	0	U

E

[Redacted] *1088 NA*  
 [Redacted]  
 [Redacted]  
 [Redacted] - C *\$100<sup>00</sup>*  
 [Redacted] *100 Dollars*  
 [Redacted]  
 [Redacted] *Consultant* [Redacted]

B

B

E

[Redacted]  
 [Redacted]  
 [Redacted]

E-

[Redacted]  
 [Redacted]  
 [Redacted]

B

[Redacted] *November 27 1955 No.* [Redacted]  
 [Redacted]  
 This [Redacted]  
 [Redacted] *total fifty one* [Redacted]  
*Salary* [Redacted] *153 Dollars*  
 [Redacted]

B

B

[Redacted] [Redacted] [Redacted]  
 [Redacted] [Redacted] [Redacted]  
 [Redacted] [Redacted] [Redacted]

C

E

E

November 29 1958

Pay to the order of

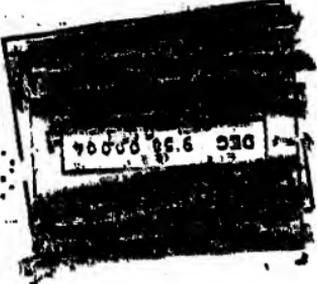
897 75  
100 Dollars

Salary

B

B

C



E

[REDACTED]

[REDACTED]

DEC 3 1958

[REDACTED]

[REDACTED]

[REDACTED]

Pay to the order of

Five hundred

Dollars

Salary

[REDACTED]

E

100. ... ..

100  
1000

100  
1000

... ..

100  
1000

E

100  
1000

B

B

E

C

E  
 19...  
 [REDACTED]  
 [REDACTED]  
 [REDACTED] - C  
 Pay to the order of [REDACTED]  
 Dollars  
 [REDACTED]  
 [REDACTED] E

B

B

[REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED] E  
 C

√	1	0	0	0	0	0	C
√	2	0	8	9	1	0	√
	1	6	9	1	0	7	√
	2	0	8	1	9	7	√
	1	5	5	7	2	5	√
		9	7	5	5	5	√
				.0	.0	.0	
				.0	.0	.0	
	9	3	6	3	0	1	#

C

E



October 20 1952 NR

E E

(C)

Pay to the order of

One hundred

no Dollars

Consistent

B

C

**B**

October 29 1958 No. **E**

**E** **E** **E**

**C** \$262.27

Number for sight

**E** **B** \$770 Dollars

**D**

**AUTHORIZED SIGNATURE**

**C**

**E** **E**

6301 89 6

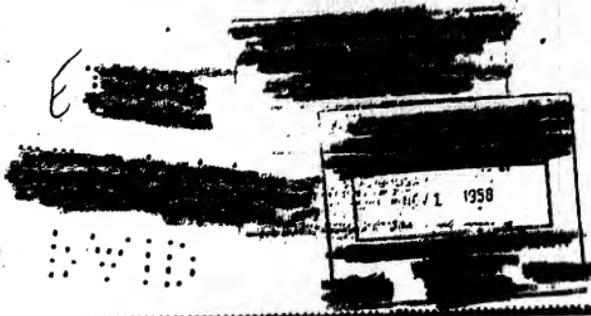
[Redacted] *Washington of road No* **E**  
 [Redacted] **E**  
 [Redacted] **C** \$ 167<sup>00</sup>  
 [Redacted] *in* **B** *to Dollars*  
 Salary **C** [Redacted]

C

[Redacted] **E**  
 [Redacted] **E**  
 [Redacted]

[Redacted]  
 [Redacted]  
 1000 000 10N  
 NOV 8 1950  
 [Redacted]

E



E

Walter J. ...

[Redacted] E  
 [Redacted] E  
 [Redacted] C  
 [Redacted] 97 Dollars  
 [Redacted] B  
 [Redacted] C  
 Salary

B

APPROVED

C

E

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

CONFIDENTIAL

•••••

•••••

•••••

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•••••

(Continued on page 1053) No

[REDACTED]

[REDACTED]

[REDACTED]

8/21/52

W. J. Collins

10/1/52

APPROVED SIGNATURE

(C) *Collier's* No. 58 No. E  
E  
 C \$9<sup>00</sup>  
 Dollars  
 B *Salary* C SIGNATURE  
 B

C  
E  
 SAC O. J. L. HEN



September 30, 1958 No. [redacted]

E [redacted]

B

Pay to the order of

One [redacted]

and a fifty-cent [redacted]

\$151.53

153 Dollars

Salary

B

C

C

E

100 100

For Deposit

[REDACTED]

[REDACTED]

E

B

[REDACTED]

[REDACTED]

\$169

Salary

B

C

[REDACTED]

12-12-1938



September 30 1958 No. [REDACTED] E [REDACTED]  
 [REDACTED] 297 [REDACTED]  
 [REDACTED] seven [REDACTED] 1500 [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED] [REDACTED]

In deposit only

[REDACTED] [REDACTED] [REDACTED] [REDACTED] E [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

September 30 1954 No. [redacted] E

Pure  
Litho  
[redacted]

\$ 208 98

Two h [redacted] eight

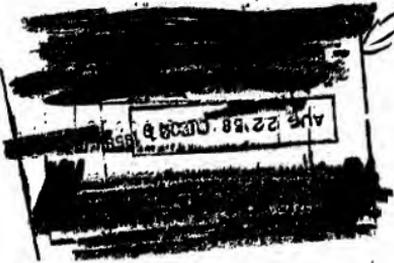
98 Dollars

Selwyn

B

E

C



APR 22 1958

1	43	15	C
7	9	55	V
2	9	57	V
2	0	89	V
1	6	97	V
1	0	0	0
2	0	8	0
1	3	0	5
			2
			7
			2

Washington DC August 20 1958 No 1504



\$143<sup>15</sup>

Enc. Enclosed

15 Dollars

Solany



WINN-DIXIE STORES  
[REDACTED]  
[REDACTED]  
8961 11 0 0111  
C. 001 000 289,82 000  
[REDACTED]  
[REDACTED]

Washington, D.C. December 20, 1958 No. 1505

[REDACTED]  
[REDACTED]

Seventy-nine

\$79  
79 Dollars

Bonus

ADVANCED SYSTEMS

**RECEIVED**

FOR DEPOSIT ONLY  
PAY TO THE ORDER OF  
ANY BANK, BANKER OR TRUST CO.  
OR OTHER FINANCIAL INSTITUTION

10198 0200 000

10198 0200 000

10198 0200 000

10198 0200 000

8  
Pay to the

10198 0200 000

Washington, D.C. August 22 1958 No 1506

[REDACTED] E [REDACTED]

[REDACTED] C \$ 95 75

hundred and nine and 75/100 Dollars

[REDACTED]

AUTHORIZED SIGNATURE

WASHINGTON, VIRGINIA

[REDACTED]  
 [REDACTED]  
 SEP 1 5 58 PM '58  
 [REDACTED]  
 [REDACTED]

[REDACTED]  
 [REDACTED]  
 [REDACTED]

Washington, D.C.

252 No 1507

[REDACTED]  
 [REDACTED]

[REDACTED]  
 [REDACTED]

bid

Sl...

[REDACTED]  
 [REDACTED]



Washington, D.C. August 24, 1958 No. 1509

*B*

(D)

Pay to the order of

[REDACTED]

*6*

[REDACTED]

\$ 11.00

One hundred and eighty dollars

*Henry*

[REDACTED]

*See Report*

[REDACTED]

[REDACTED]

1058 No. 1510

(C)

[REDACTED]

U.S. N. W.

100.00

[REDACTED]

20 Dollars

Consultant

[REDACTED]

SHIRAZ MUMUKYAN

[REDACTED]

[REDACTED]

SEP 6 58 531A04

[REDACTED]

88

Washington, Pa August 29 1858 No 1511

[Redacted]

One hundred & eight <sup>97</sup>/<sub>100</sub> Dollars

Shanty

[Redacted]

[Redacted]

ALL INFORMATION ON THIS CARD  
PRIOR ENDORSEMENTS MUST BE  
SEP 9 1898  
[Redacted]



July 31 1958 No

E E

C

\$ 143<sup>15</sup>

hundred forty-three

Dollars

E B  
E C

B

c

E

E

1958

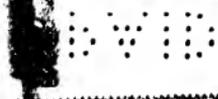
AMERICAN SAVINGS BANK

AMERICAN SAVINGS BANK



E

E

  
  
  
 AUG 4 08 0012  
 AUG 4 1958

B

100  
 50  
 20  
 10  
 5  
 2  
 1  
 .50  
 .20  
 .10  
 .05  
 .02  
 .01

July 31 1958 No  
  
  
  
  
 Salary

E  
 E  
 75  
 C \$97  
 75 Dollars  
 C

July 31 1956 No

E

Pay  
to the  
order of

One Hundred

and no/100 Dollars

Consultant

via

B  
C

[Redacted]

C

[Redacted]

C



E

Handwritten text, possibly a name or title, written vertically.

MAR 2 1958

Subject 1958 NA



been back's eight

828 17  
33 Clifton

De Vary

Handwritten initials or signature, possibly 'B'.



B

1958 No.

E



E

Pay  
to the order of



C

\$169<sup>10</sup>

One hundred and sixty-nine

10/100 Dollars

Salary

E

B



C

AUTHORIZED SIGNATURE

H

C

E



06 JUN 1958

E



✓  
 1 0 5 5  
 9 2 8 7 5 5  
 5 2 8 7 5 5  
 1 4 8 7 5 5  
 1 1 2 2 0 0

00  
 00  
 9 2 7 5 5 #

B June 30 1958 No. [redacted] E  
 [redacted] E  
 [redacted] C  
 [redacted] B  
 [redacted] C  
 [redacted] 15  
 [redacted] 15 Dollars  
 [redacted] B  
 [redacted] C

[redacted] E  
 [redacted] F  
 [redacted] 8661 6 e 718 6678 P  
 [redacted]



*B*

Issue No. 1058 No. *E*

*Pay to the order of*

*75*

*75 Dollars*

*See page* *E*

*B*

AUTHORIZED SIGNATURE

*For deposit only*

*C*

*E*

JUL 7 1958

JUL 7 1958

*E*

C

found [unclear]

[Redacted] E  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]

[Redacted] E  
[Redacted]  
[Redacted] 05.27 [Redacted]  
[Redacted]  
[Redacted]

B

[Redacted]

[Redacted] June 20 1955 [Redacted] E  
[Redacted] E  
[Redacted] C  
[Redacted] read a night

[Redacted] E  
\$268 78  
26 Dollars

Salary E

B

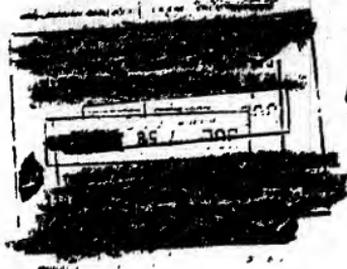
[Redacted]

45-10

C

E

B



B

June 30 1958



For  
the  
month of

hundred

C

\$100.00

of Dollars

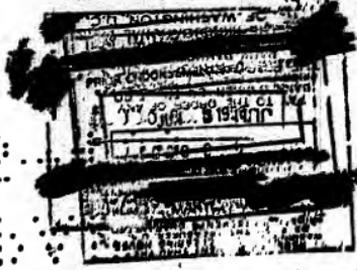
Consultant

B





For Raymond



U.S. MAIL

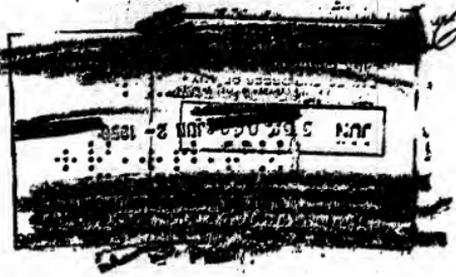
Washington, D.C. May 29, 1958 No 1469

(D)

Are hereby ~~\_\_\_\_\_~~ ~~\_\_\_\_\_~~ \$ 189.10  
188 Dollars

Salary

REGISTERED MAIL



*B*

Washington, D.C. May 29 1948 No 1470

Pay to the order of

Two hundred  
Dollars

\$ 208 98

208 Dollars



75-13

ET non deposit only

JUN 2 - 1968



Washington, D.C. 2058 No 1471

Pay to the order of

(D)

Ninety-seven

Salary

\$ 97 75

150 Dollars

For deposit  
1958

THE NATIONAL ARCHIVES  
 COLLECTOR  
 WASHINGTON, D.C. 20540  
 MAY 2 1958  
 1472

3

12

Washington, D.C.

May 2

1958

No 1472

By  
the  
manager

CHECK

\$ 208.97

Two hundred and eight

270 Dollars

Salary

AUTHORIZED SIGNATURE



(B)

April 30 1957 No.

(E)

Pay to the order of

(C)

\$169<sup>10</sup>

One hundred and sixty nine <sup>10</sup>/<sub>100</sub> Dollars

Salary

ETG

(B)

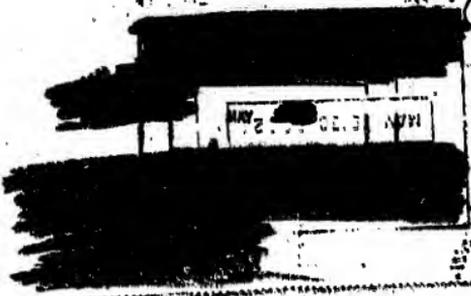
(C)

AUTHORIZED SIGNATURE

169	10	00	¢
143	15	00	¢
120	97	50	¢
29	75	80	¢
10	00	00	¢
927	95	00	¢

(C)

On deposit



(E)

MAY 2 1957

City of

(D)

April 30 1958 No

(E)

(C)

\$143<sup>15</sup>

One hundred forty three

15 Dollars

Salary

(B)

(C)

(D)

(E)

Y-O-R DEPOSIT CHECK

MAY 2 5	MAY 1 1958
---------	------------

April 30 1958 No. [redacted]

Paid to order of

Two hundred and eight

Salary

91 \$208

97 Dollars

ENDORSED SIGNATURE

(C)

(E)

AMV - 6 AMV 62123456 AMV

(5)

(4)

(6)

[REDACTED]

1-0000 85.9 AMT

[REDACTED]

(b)

Pay  
to the order of

Trusty

Salary

April 1958 No.

[REDACTED]

(E)

\$ 97.75

75

(D)

(C)

[REDACTED]

INDIAN SIGNATURE

(B)

011122

Pay  
to the  
order of

Two hundred ~~and~~ ~~no~~ ~~100/100~~

Salary

APR 30 1958

(E)

(C)

\$208<sup>98</sup>

98 Dollars

(B)  
(C)

FIELD SIGNATURE

(C) (C)

(E)

MAY 6 1958

(C)

(E)

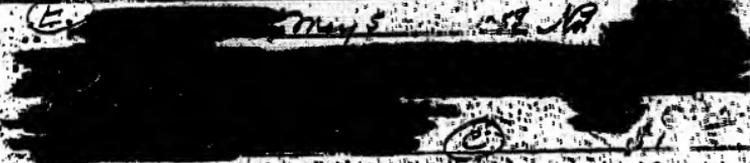
(E)



(B)

(E)

May 5 1952



(E)

Personal



c

Don't  
forget

[Redacted]

[Redacted]

[Redacted]

e

143	155	c
197	175	
169	198	
208	007	
308	000	
927	095	e

B

[Redacted]

[Redacted] March 1958 for [Redacted] e

[Redacted] e

[Redacted] c

[Redacted] in back of [Redacted] 8/25/57

[Redacted] B [Redacted] c

the Larry

St. Collins

45-15

C  
[Redacted]

E  
[Redacted]

B

[Redacted]

Pay to the order of

[Redacted] March 31 1958 No. [Redacted] E

One hundred  
Salary

\$ 100 00  
100 Dollars

[Redacted]

March 31 1958 No. [redacted] E  
[redacted] E  
[redacted] C  
[redacted] 98  
[redacted] \$208  
[redacted] 98 Dollars  
[redacted] B  
[redacted] C  
Salary

E

[redacted]

[REDACTED] 51-1958 No. [REDACTED] E  
 [REDACTED] E  
 [REDACTED] C \$169<sup>10</sup>  
 Pay to the order of [REDACTED]  
 [REDACTED] 190 Million  
 [REDACTED] [REDACTED] [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED]  
 [REDACTED] [REDACTED] [REDACTED]

D

March 31 - 1958 No. [redacted]

Pay to the order of

\$97<sup>75</sup>

Ninety

Dollars

Salary

9810 011

C

E

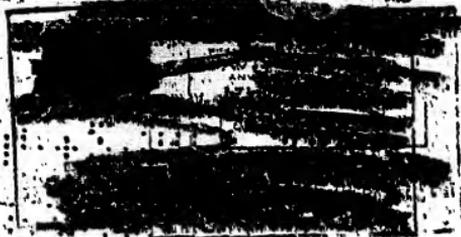


March 31 1958 No. [redacted]

Pay  
to the  
order of

One hundred & forty three  
Dollars  
Salary

\$ 143<sup>15</sup>/<sub>100</sub> Dollars





Washington, D.C. February 28 1958 No. 1406

M  
N

Pay to the order of

Mr. [Redacted]

B  
S  
S

[Redacted]

\$97 75  
75 Dollars  
[Redacted]

MECHANIZED SIGNATURE

RECEIVED BY THE HOUSE  
WASHINGTON, D.C. FEBRUARY 28 1958  
MAR 4 1958  
THE BANK OF AMERICA TRUST CO.  
WASHINGTON, D.C.

C

Washington, D.C. Federal Reserve Note No. 1407

*Pay to the order of*

[REDACTED]

[REDACTED]

\$169<sup>10</sup>

One hundred <sup>and</sup> sixty-nine

<sup>10</sup>/<sub>100</sub> Dollars

[REDACTED]

Authorized Signature

*see slip*

[REDACTED]

PAY TO THE ORDER OF ANY  
 BANKER OR TRUST  
 COMPANY OR PAYEE'S ACCOUNT  
 AND CASH ON HAND AT THE  
 FEDERAL RESERVE BANK OF  
 WASHINGTON, D.C.

[REDACTED]

[REDACTED]

[REDACTED]

1954

[REDACTED]

For Deposit

PAY TO THE ORDER OF ANY  
 BANK PART OR TRUST CO  
 JAN 28 - 1958  
 458  
 OF THE DISTRICT OF COLUMBIA  
 FEDERAL RESERVE BANK

Washington, D.C. February 28 1958 No 1408

Pay to the order of

Two hundred and fifty dollars

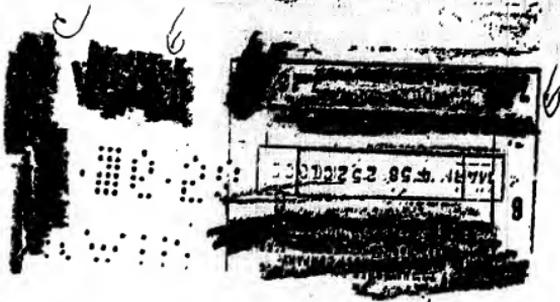
Secretary

SSS 97

97 Dollars

[Redacted Signature]  
 AUTHORIZED SIGNATURE





Washington, D.C. - 1958, 1st 1410

Page  
1 of 1

5/2

100 Letters

100 Letters





Washington, D.C. March 7, 1958. No. 1423

... is in ...  
... to the ...

... P. D.

2 ...

10

Remembered - one step four

\$174

164 Dollars

withhold Tax

[Redacted]

[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]

0 7 0 0  
0 0 0 0

E  
E  
E

0000  
0000

12-27

90061 85.61 AVI

NO RECEIVED PAYMENTS THROUGH THE  
FEDERAL RESERVE BANK OF  
WASHINGTON, D.C.

PAY TO THE ORDER OF

45-17

NOV 26 1968

E

E

E

Washington, D.C. 20540

1968 No 1440

EW E

226142 C 174 10

100 Dollars

00000

Erasmus Lys Lee Tapes

W. R. H. H. H. H.

C

The che  
 obligatio  
 and acco

Washington DC May 7 1957 No 1452

*[Redacted]*  $\frac{5}{174} \frac{10}{10}$

*[Redacted]*  $\frac{12}{1000}$  Dollars

*[Redacted]*  $\frac{1}{1000}$

*[Redacted]*

*[Redacted]*

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

*[Redacted]*

MAY 1958

*[Redacted]*

PAY TO THE ORDER OF

*[Handwritten marks]*

Classified

Classified

E

[REDACTED]

75029.0511 NAD

[REDACTED]

48 MICHIGAN

E

E

♡

Washington, D.C. June 1958 No 1477

[REDACTED]

[REDACTED]

E

One hundred

[REDACTED]

174<sup>10</sup>

130 Dollars

withheld taxes &  
Social Tax

E

[REDACTED]

B

AMERICAN SAVINGS

Washington, D.C. July 23 1958 No. 1486

①

Pay to the order of

[REDACTED]

13211

E E  
B \$174<sup>00</sup>

(Handwritten) 100-0000 - four - Dollars

W. H. K. [REDACTED]  
2 Social Security  
Capitol Building, Wash. D.C.

[REDACTED] C

②  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

E

Washington, D.C. August 8 1958 No 1498

[Redacted]  
 [Redacted]  
 [Redacted]  
 [Redacted] \$174.10  
 [Redacted] seventy-four — 19 Dollars  
 [Redacted]  
 AUG 10 1958  
 [Redacted]  
 [Redacted]

AUG 13 58 63065

TO THE ORDER OF





[REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED] 36618 100  
 [REDACTED]  
 [REDACTED]

[REDACTED]  
 [REDACTED]  
 [REDACTED]

1402497 Washington, D.C. October 22 1952. No 1528

Pay to the order of

Rece

Withholding Tax

[REDACTED]  
 [REDACTED]  
 C \$ 375  
 95 Dollars

AUTHORIZED SIGNATURE

B

09.11.1951

Washington, D.C. November 4, 1951 No 1540

This check is the obligation to pay and must be presented to the payee on or before NOV 11 1953

One hundred and 75 <sup>98</sup>/<sub>100</sub> Dollars

W. H. Taylor, Act

[Redacted]

[Redacted]

[Redacted]

[Redacted]

B



Washington, D.C.

JAN 15 1968

No. 12

1597

CP  
1/15/68

The enclosed copy of the  
[redacted]

Washington, D.C.  
[redacted]

10450

341 68  
68  
The Dallas

[redacted]

[redacted]

1570  
[redacted]

1570  
[redacted]

ALL INFORMATION CONTAINED  
HEREIN IS UNCLASSIFIED  
DATE 08-14-2001 BY 60322 UCBAW

1	2	0	0	0	0	0	U
3	0	0	0	0	0	0	N
1	5	0	0	0	0	0	I
							#

1	1	0	0	0	0	0	U
1	1	0	0	0	0	0	N
							I
							#

*Special*  
*2602*

45-19

REPORT OF EXPENDITURES

February 1, 1957 - January 31, 1958

Research Grants:

B	[REDACTED]	\$50,150.00	
	[REDACTED]	<u>1,605.00</u>	\$51,755.00
B	[REDACTED]		12,381.31
B	[REDACTED]		<u>4,591.95</u>
	[REDACTED] and Social Security		\$ 68,728.26
			16,917.65

Travel and Meetings:

CCCCC	[REDACTED]	\$183.87	
	[REDACTED]	282.36	
	[REDACTED]	249.53	
	[REDACTED]	264.00	
	[REDACTED]	360.17	
	[REDACTED]	<u>239.33</u>	
			1,869.28

Special Chemicals:

PPPP	[REDACTED]	6,280.00	
	[REDACTED]	2,526.21	
	[REDACTED]	270.80	
	[REDACTED]	517.40	
	[REDACTED]	<u>300.00</u>	
			9,894.41

Supplies:

VVVV	[REDACTED]	1,633.83	
	[REDACTED]	231.00	
	[REDACTED]	522.02	
	[REDACTED]	131.76	
	[REDACTED]	<u>85.06</u>	
			<u>2,603.67</u>

Total

\$ 100,013.27



Washington, D.C. 20540  
[Redacted] E E

B \$278.20

two hundred and seventy

Special tickets

[Redacted] B  
[Redacted] C

Washington, D.C. 20540 1981

(B) [Redacted] E E

B \$1000

Three hundred

Special tickets

[Redacted] B  
[Redacted] C

[Redacted] E E

B

[Redacted]

[Redacted] B  
[Redacted] C

B

Washington, D.C. 20540  
[REDACTED] 1957, in 1958

[REDACTED]

E E

B

... and ...  
... ..  
... ..

B

[REDACTED]

B

C

Washington, D.C. 20540  
[REDACTED] 1957, in 1958

[REDACTED]

[REDACTED]

E E

B

The ... ..  
... ..  
... ..

... ..

[REDACTED]

B

C

B

**[Redacted]**

B

**[Redacted]**

E **[Redacted]** E

**[Redacted]**

B

**[Redacted]**

B

C

**[Redacted]**

B

2	4	0	0	0	0
2	5	0	0	0	0
1	3	8	0	0	0
				0	0
				0	0
6	2	8	0	0	0

1800

(D)

[REDACTED]

B

The  
letter

On the subject of the  
special chemicals

B

Washington, D.C. March 1 1957. No 1800

(D)

[REDACTED]

B

The  
letter

On the subject of the  
special chemicals

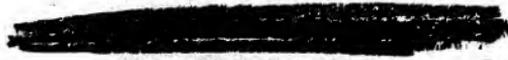
June 1957  
1800  
1800

B

1 5 2 3 8 7  
 1 4 5 0 1  
 8 5 0 8 4  
 2 5 2 6 2 1  
 #



B



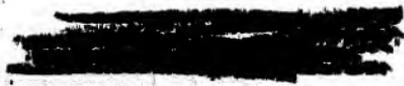
E



E



B



B

C

B



E

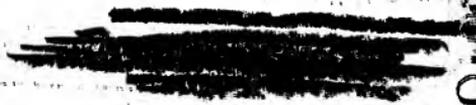


E



B

B



C

Washington, D.C.

1954. 1. 1203

[REDACTED]

E E

[REDACTED]

B

5/1

*[Faint handwritten text]*

1954. 1. 1203

[REDACTED]

B

[REDACTED]

L

B

Washington, D.C. January 10, 1952

[Redacted] E E E

[Redacted] C

[Redacted]

[Redacted] B C

Washington, D.C. January 10, 1952

(D) [Redacted] E E E

[Redacted] C

[Redacted] B C

B

45-10

Washington, D.C. 20535-12 1985

Vertical blacked-out text on the left margin.

[Redacted] E [Redacted] E  
[Redacted] C

[Redacted] B  
[Redacted] C

B

Washington, D.C. 20535-12 1985

Vertical blacked-out text on the left margin.

[Redacted] E  
[Redacted] C

[Redacted] B  
[Redacted] C

B

11

[REDACTED]

E E E

C

[REDACTED]

B

C

B

11

[REDACTED]

E E E

C

[REDACTED]

B

B

Washington, D.C. August 14, 1950

[REDACTED]

E E  
E

Dear Mr. [REDACTED]:  
[REDACTED]

B  
C

Washington, D.C. August 14, 1950

[REDACTED]

E E

Dear Mr. [REDACTED]:  
[REDACTED]

C

[REDACTED]

B  
C

B

**B**

[REDACTED]

**E**

[REDACTED]

**C**

**C**

[REDACTED]

**B**

**C**

*Handwritten signature*

U#IU	#1
0000	009
008	000
098	285
8775	600
4315	009
2898	
2500	
2739	
2189	
2793	
4691	
4000	
4000	
4000	
5000	
5000	
1748	
1893	
2289	
1100	
2856	

15-2

Washington, D.C. November 19 1957. In 1371

[REDACTED] E E

[REDACTED] C 1957

[REDACTED]

[REDACTED]

B

Washington, D.C. November 19 1957. In 1370

[REDACTED] E E

[REDACTED] C 1957

[REDACTED]

B

Washington, D.C. December 27 1937

**[REDACTED]**

**[REDACTED]** E E  
**[REDACTED]** C

B

Washington, D.C. December 27 1937

**[REDACTED]**

**[REDACTED]** E E  
**[REDACTED]** C

B

**[REDACTED]** B  
**[REDACTED]** C

Handwritten text, possibly a date or name, with a large blacked-out redaction block. To the right of the redaction are the letters "E E E".

Handwritten text, possibly a name, with a large blacked-out redaction block. To the right of the redaction is the letter "C".

Handwritten text, possibly a name, with a large blacked-out redaction block. To the right of the redaction is the letter "B".

Handwritten text, possibly a name, with a large blacked-out redaction block. To the right of the redaction is the letter "C".

B

Handwritten text, possibly a date or name, with a large blacked-out redaction block. To the right of the redaction is the year "1964".

Handwritten text, possibly a name, with a large blacked-out redaction block. To the right of the redaction are the letters "E E E".

Handwritten text, possibly a name, with a large blacked-out redaction block. To the right of the redaction is the letter "C".

Handwritten text, possibly a name, with a large blacked-out redaction block. To the right of the redaction is the letter "B".

B

45-41

Handwritten: 100 K... 1962

[Redacted] E E E  
[Redacted] C

[Redacted] B C  
[Redacted]

Handwritten: 100 K... 1961

(P) [Redacted] E E E  
[Redacted] C

[Redacted] B  
[Redacted]

[REDACTED] E E E

[REDACTED] C

[REDACTED] B

[REDACTED] C

[REDACTED] E E E

[REDACTED] C

[REDACTED] B

[REDACTED]

**[REDACTED]**

**[REDACTED]** E E E  
C

**[REDACTED]** B  
C

**[REDACTED]** B

**[REDACTED]** E E E  
C  
**[REDACTED]**

B

[REDACTED] E E E  
C  
[REDACTED] B

B

[REDACTED] E E E  
C  
[REDACTED] B

State of Illinois, County of Cook

1939

[Redacted vertical text]

[Redacted horizontal text]

E E E

[Redacted horizontal text]

e

[Redacted horizontal text]

[Redacted horizontal text]

B  
C

B

[Redacted vertical text]

[Redacted horizontal text]

E E E

E

[Redacted horizontal text]

B

Washington, D.C. January 1, 1957. In 1956

(D) [REDACTED] E E E

[REDACTED] C

[REDACTED] B

[REDACTED] B

[REDACTED] E E E  
[REDACTED] C

[REDACTED] B



|||

[REDACTED]

E E

E

[REDACTED]

B

C

B

|||

[REDACTED]

E E

✓

[REDACTED]

B

C

B

[Redacted vertical text]

B

[Redacted horizontal text] E E E  
C

[Redacted horizontal text] B

[Redacted vertical text]

B

[Redacted horizontal text] E E E  
C

[Redacted horizontal text] B  
C

[REDACTED]

B

[REDACTED] E E E  
C

[REDACTED] b  
[REDACTED] c

[REDACTED]

[REDACTED] E E E  
C

[REDACTED] B  
[REDACTED] C



Washington, D.C. ... 1957. No. 1328

[REDACTED]

E E E

100  
100  
100

Four hundred and ...

100  
100  
100

[REDACTED]

D

Washington, D.C. ... 1957. No. 1329

[REDACTED]

E E E

100  
100  
100

Four hundred and ...

[REDACTED]

B  
C

D

Washington D.C. 20535 - 1957. Nov 1329

[REDACTED]

E E

C

[REDACTED]

B

Washington D.C. 20535 - 1957. Nov 1329

[REDACTED]

E E E

C

[REDACTED]

B

C

B

B

(P)

[REDACTED] E E  
 [REDACTED]  
 [REDACTED]  
 [REDACTED] B  
 [REDACTED] C

(D)

Washington D.C. 1957. 10 1325  
 [REDACTED] E E  
 [REDACTED] C  
 [REDACTED] B  
 [REDACTED] C



45-24

Washington, D.C.

1957, Jan 1958

E E

E

B

C

b

Washington, D.C. 20540, 10/7/50 1317

*[Vertical scribbles]*

*[Redacted line]* E E

*[Redacted line]* C

*[Redacted line]*

*[Redacted line]* B

Washington, D.C. 20540, 10/7/50 1317

*[Vertical scribbles]*

*[Redacted line]* E E

*[Redacted line]* C

*[Redacted line]* B C

**B**

~~REDACTED~~ **E E**  
~~REDACTED~~ **C**

~~REDACTED~~ **B**  
~~REDACTED~~ **C**

**B**

*Handwritten text* 1940 **E E**  
~~REDACTED~~ **C**  
*Handwritten text*  
~~REDACTED~~ **B**

Washington, D.C. January 25, 1954

**[REDACTED]** **E E**

**[REDACTED]**

**C**

Dear Mr. [REDACTED]:

**[REDACTED]** **B C**

**B**

Washington, D.C. January 25, 1954

**[REDACTED]** **E**

**[REDACTED]**

**C**

**[REDACTED]** **B C**

**B**



Washington, D.C. Jan 1962

[REDACTED]

[REDACTED]

C

[REDACTED]

[REDACTED]

B

C

B

Washington, D.C. Jan 1962

[REDACTED]

E

E

[REDACTED]

C

[REDACTED]

[REDACTED]

B

C

B

Washington, D.C. 20540

IN 1237

**H**

[REDACTED]

E E E

[REDACTED]

C

75  
5000  
Within

[REDACTED]

[REDACTED]

B

C

D

Washington, D.C. 20540

IN 1300

**H**

[REDACTED]

E E E

[REDACTED]

C

75  
5000  
Within

[REDACTED]

[REDACTED]

B

C

D

Handwritten text, possibly a date or reference number, including "1955".

[Redacted line of text]

[Redacted line of text]

C

[Redacted line of text]

B

**[Redacted]**

**[Redacted]**

**E E**

**C**

**[Redacted]**

**C**

**[Redacted]**

**[Redacted]**

**E E**

**C**

**[Redacted]**

**B**

**C**

**B**



45.26

123:

[REDACTED] E [REDACTED] E  
[REDACTED]  
[REDACTED]

[REDACTED] B  
[REDACTED]

[REDACTED] E  
[REDACTED] e

[REDACTED] B

[REDACTED] O

[REDACTED] B

[Redacted]

B

[Redacted]

E E

✓

[Redacted]

B  
D

[Redacted]

B

[Redacted]

IN 1281  
[Redacted]

D

[Redacted]

B  
C



0



b



E E

c



b  
c



B



E E

c



E

[Redacted vertical text]

b

[Redacted horizontal text]

E

[Redacted horizontal text]

C

[Redacted horizontal text]

C

[Redacted vertical text]

b

[Redacted horizontal text]

E

C

[Redacted horizontal text]

B

C

[Redacted vertical bar]

B

[Redacted line]

E

E

[Redacted line]

C

[Redacted block]

B

C

[Redacted vertical bar]

B

[Redacted line]

E

E

[Redacted line]

C

[Redacted block]

C



[Redacted vertical text]

b

[Redacted horizontal text] E E  
[Redacted horizontal text] c

[Redacted horizontal text] B  
[Redacted horizontal text] C



[Redacted vertical text]

b

[Redacted horizontal text] E E  
[Redacted horizontal text] c

[Redacted horizontal text] c

[REDACTED]

b

[REDACTED]

E [REDACTED] E

c

[REDACTED]

[REDACTED]

b

[REDACTED]

E [REDACTED] E

c

[REDACTED]

B.  
C

[Redacted vertical text]

B

[Redacted vertical text]

B

[Redacted horizontal text] E

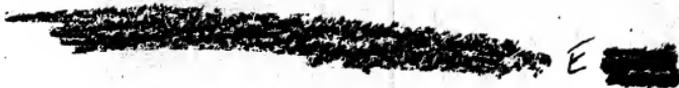
[Redacted horizontal text] B  
[Redacted horizontal text] C

[Redacted horizontal text] E  
[Redacted horizontal text] E  
[Redacted horizontal text] C

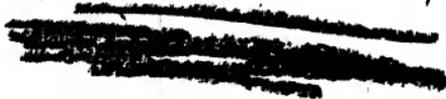
[Redacted horizontal text] B  
[Redacted horizontal text] C



B



E



B

C



B



E

E

C



D

C

9 500340  
 5 22112  
 6 758598  
 200 729575000  
 800 548768000  
 # N1\*11

*Spaul*

Washington, D.C. 20571  
 1957. 1. 1968  
 [REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED]

*6*

[Redacted vertical text]

[Redacted line] E E

[Redacted line] C

[Redacted line]

[Redacted line] C

B

[Redacted vertical text]

Washington, D.C. [Redacted] No. 1236

[Redacted line] E E

[Redacted line] C  
[Redacted line]

[Redacted line] C

B

[Redacted vertical text]

Washington, D.C. [Redacted] No. 1235

[Redacted line] E E

[Redacted line] C  
[Redacted line]

[Redacted line] B  
[Redacted line] C

B

Washington, D.C. April 29, 1957. No. 1228

(D)

[REDACTED]

E E

5420

Pay to the order of

[REDACTED]

\$ 155.00

One hundred & fifty dollars

Paul C. Walker

W.H. Sells & Company

[REDACTED]

B C

AUTHORIZED SIGNATURE

Washington, D.C. April 29, 1957. No. 1232

(D)

[REDACTED]

E E

Pay to the order of

[REDACTED]

C

Twenty dollars

\$ 20.00

Salary

[REDACTED]

B C

Paul C. Walker



45-30

Washington, D.C. March 12, 1957. No. 1199

(D) [REDACTED] E E

Pay to the order of

[REDACTED] C \$250.00

Two hundred and fifty dollars

[REDACTED]

B

AUTHORIZED SIGNATURE

Washington, D.C. March 12, 1957. No. 1210

(D) [REDACTED] E E

Pay to the order of

[REDACTED] C \$100.00

One hundred dollars

[REDACTED]

C

AUTHORIZED SIGNATURE

48-50

Washington, D.C. Thursday, 1957. No. 1220

[REDACTED]

E E

[REDACTED]

C

3105

[REDACTED]

3700

[REDACTED]

B

Washington, D.C. Thursday, 1957. No. 1219

[REDACTED]

E E

[REDACTED]

C

597-75

[REDACTED]

B

Washington, D.C. July 27 1951. In 1221

D [REDACTED] E [REDACTED] F [REDACTED]

[REDACTED] C [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Washington, D.C. July 27 1951. In 1221

D [REDACTED] E [REDACTED] F [REDACTED]

[REDACTED] C [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

*[Vertical scribble]*

*[Redacted block]* E E  
C

*[Redacted block]*

B

*[Vertical scribble]*

*[Redacted block]* 1222  
E E  
C

*[Redacted block]* C

22

1	2	4	0	7	0	6	✓
2	9	8	3	3	3	✓	
1	3	5	5	7	7	✓	
9	9	7	7	5	5	✓	
1	0	0	0	0	0	✓	
				0	0		
				0	0		
9	9	0	3	9		#	

Washington, D.C. January 3 1957. No. 1195

(D) [REDACTED] E E

[REDACTED] C 1195 76

One hundred and fifty dollars

[REDACTED] B C

RECEIVED SIGNATURE

Washington, D.C. January 3 1957. No. 1193

(D) [REDACTED] E E

[REDACTED] C 1193 93

Two hundred and eighty dollars

[REDACTED] B C

RECEIVED SIGNATURE

Washington, D.C. January 3 1957. No. 1193

(D) [REDACTED] E E

[REDACTED] C 1193 93

Two hundred and eighty dollars

[REDACTED] B C

RECEIVED SIGNATURE

Washington, D.C. January 25 1957. No. 1194

[REDACTED] E E

[REDACTED] C \$105.57

Washington, D.C. [REDACTED] B

[REDACTED] C

Washington, D.C. January 25 1957. No. 1196

[REDACTED] E E

[REDACTED] C \$97.75

Washington, D.C. [REDACTED] B

[REDACTED] C

Washington, D.C. January 25 1957. No. 1197

[REDACTED] E E

[REDACTED] C \$100.00

Washington, D.C. [REDACTED] B

[REDACTED] C



45-33 00  
00  
00  
4225  
9311  
8591  
7249  
1603  
6792  
00  
00  
5220

Vertical markings on the left side of the page.

[REDACTED]

E. ~~\_\_\_\_\_~~

[REDACTED]

B

*Washington, D.C. ...*

[REDACTED]

B

*Washington, D.C. ...*

[REDACTED]

E. ~~\_\_\_\_\_~~

[REDACTED]

B.

[REDACTED]

B

B  
C

153  
1275

[REDACTED]

E E E

B.

[REDACTED] B  
C

Washington, D.C. October 15 - 1957 No 1319

(D) [REDACTED]

E E E

Eighty-five  
Supplies

D

\$ 85.91

91 Dollars

[REDACTED]

457

Washington, DC November 12 1957 No 1335

(D) [Redacted] E

Pay to the order of

W. J. [Redacted]

B

1893

15412 15612, 15674, 15788  
Receipt 2009 27757

11 Dollars

[Redacted]

U.S. MAIL

Washington, DC November 12 1957 No 1349

(D) [Redacted] E

Pay to the order of

W. J. [Redacted]

B

1893

B

[Redacted]

B

C



**[REDACTED]**

**[REDACTED]** E E

**[REDACTED]**

B

**[REDACTED]**

B

**[REDACTED]**

Washington, D.C. Dec 21 1957

127a

**[REDACTED]** E E

**[REDACTED]**

B

One hundred thirty seven

8157

**[REDACTED]** B

B

**[REDACTED]**

Washington, D.C. Dec 21 1957 No 1356

**[REDACTED]** E E E

**[REDACTED]**

B

One hundred and fifty seven

8157

**[REDACTED]** B

B

Washington, D.C. Monday, 11/13/57. No. 1243

My father  
One hundred seventy-one  
\$171.18  
1800  
E

supplies  
D  
C

Washington, D.C. Monday, 11/13/57. No. 1225

[Redacted]  
B  
E

[Redacted]  
D

Washington, D.C. Monday, 11/13/57. No. 1208

My father  
One hundred seventy-one  
D  
E

45-74

Washington, D.C. 1954. Vol 1, 1320

(D) [REDACTED] E E

Pay to the order of [REDACTED] R \$110.42

One hundred and ten dollars

Supplies [REDACTED]

b

Washington, D.C. August 8, 1957. 1st 1202

(D) [REDACTED] E E

Pay to the order of [REDACTED] D \$121.44

One hundred and twenty one dollars

Supplies [REDACTED]

b

1312

[REDACTED]

E E

[REDACTED]

D

*Handwritten text, possibly a signature or name*

*Handwritten text*

[REDACTED]

B

D

*Handwritten text*

1077

[REDACTED]

E E

[REDACTED]

B

*Handwritten text*

*Handwritten text*

[REDACTED]

B

D

C

5	3	3	.0	00
3	3	1	8	3
3	2	2	0	0
5	3	1	7	2
L	3	8	0	6
		5	0	6
		0	0	0
5	0	3	6	7
				1*

*Repaired*

3	4	5	7	4
2	3	8	1	2
7	5	0	2	7
1	7	3	0	4
		0	0	
		0	0	
1	0	0	1	*
	2	3	7	
	13	17	5	

45-35

**[Redacted]**

B

(D)

Washington, D.C. August 14 1957. No. 1293

**[Redacted]**

The  
Honorable

**[Redacted]**

B

885

Special Agent

Congress

**[Redacted]**

Post Office

**[Redacted]**

B

AUTHORIZED SIGNATURE

**[Redacted]**

B

(D)

Washington, D.C. August 14 1957. No. 1293

**[Redacted]**

The  
Honorable

**[Redacted]**

B

885

Special Agent

Congress

**[Redacted]**

Post Office

**[Redacted]**

AUTHORIZED SIGNATURE



B  
Washington, D.C. August 11, 1957. No 1295  
[Redacted]  
[Redacted] E  
[Redacted] B  
[Redacted] \$25  
[Redacted]  
[Redacted]  
[Redacted]

B  
Washington, D.C. August 11, 1957. No 1296  
[Redacted] E  
[Redacted] B  
[Redacted]  
[Redacted]  
[Redacted]

Washington, D.C. ... 1978

*[Vertical scribbles]*

*[Redacted line]*

E E

*[Redacted line]*

B

County: ...

*[Redacted line]*

B

2nd 6/10/78  
[unclear]

*[Redacted line]*

C



Washington, D.C. November 13 1957 No. 1338

(D) [REDACTED] E

Pay to the order of [REDACTED] \$17.<sup>61</sup>

Seventeen

100/100

Supplies - oil

[REDACTED]

B

[REDACTED] E

B

[REDACTED]

Washington, D.C. 20540 13 1957. No. 1248

[REDACTED]

E E

[REDACTED]

B

1957  
100-100000

100-100000

[REDACTED]

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

Washington, D.C. 20540 13 1957. No. 1228

[REDACTED]

E E

[REDACTED]

B

1957  
100-100000

[REDACTED]

B E

B

1207  
E  
B  
557  
B  
C

Wilmington, N.C. 1374  
(D) E  
B  
Twenty-three  
County, Virginia  
B





B

(13)

Washington, D.C.

NOV 7. 1933

[REDACTED]

One hundred and fifty dollars  
Traveling Expenses

\$124

Wm. T. Sullivan

[REDACTED]

AUTHORIZED SIGNATURE

Washington, D.C. May 7 1957 No 1237

(D) [REDACTED] E [REDACTED] E

[REDACTED] C \$529

From [REDACTED] to [REDACTED] 100 Dollars

Travel expenses 1956 [REDACTED]

[REDACTED]

Washington, D.C. May 10 1957 No 1239

(D) [REDACTED] E [REDACTED] E

[REDACTED] C \$236.52

Travel and [REDACTED]

Grand entrance ACS meeting [REDACTED]

[REDACTED]

[REDACTED]

Washington, D.C.

19 Nov 1924

[Redacted] E

Pay to the order of

[Redacted] C \$264

Two hundred and sixty four dollars

[Redacted] \$20 Dollars



Washington, D.C.

19 Nov 1929

[Redacted] E E

B

Pay to the order of

[Redacted] C \$100

One hundred dollars

[Redacted]



Washington, D.C. <sup>11</sup> ~~Postoffice~~ 1957 No. 1322

(D)

~~EE~~ E

C

\$2.50 38

38 100% Cotton

Two hundred eighty-two

ETH meeting

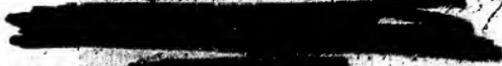
45

Washington, D.C.

1234



B



Pay to the order of



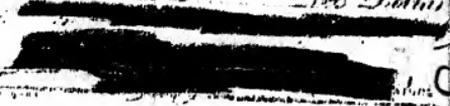
C

\$ 59<sup>16</sup>

Fifty-nine

100 Dollars

Total amount



H

B

Washington, D.C.

1321

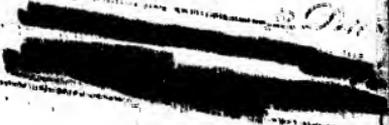


Pay to the order of



C

Total amount



B

[Redacted]

Washington, D.C. ...

[Redacted]

C

E

E

[Redacted]

B



0000
0000
0000
0000
1000
1591
1000
4591
95



D



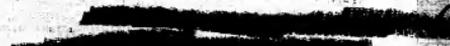
By

E



Christina Thomas

B



Washington



C



Washington, D.C. 20001



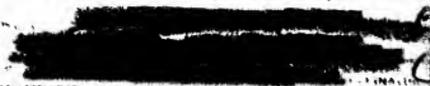
E



B



B



15-2

Washington, D.C. 1951. No 1284

**B**

[REDACTED]

**E E**

[REDACTED]

**B**

By  
to the  
subject

[REDACTED]

20  
1951

[REDACTED]

**B**

[REDACTED]

**E E**

[REDACTED]

**B**

[REDACTED]

**E**



[REDACTED]

B

[REDACTED]

C

[REDACTED]

E

[REDACTED]

[REDACTED]

B

[REDACTED]

O

E

[REDACTED]

C

[REDACTED]

45-30

B

UNITED STATES DEPARTMENT OF JUSTICE

1937. 10. 1333

E

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

B

Five thousand

and no/100ths

[REDACTED]

[REDACTED]

[REDACTED]

B

UNITED STATES DEPARTMENT OF JUSTICE

1931

E

[REDACTED]

B

Five thousand

and no/100ths

[REDACTED]

[REDACTED]

[REDACTED]



Washington, D.C. March 12, 1927. No. 1252

(D)

E

B

\$1,000

100 Dollars

B

Appropriation

AUTHORITY & SIGNATURE

Washington, D.C. August 7, 1927. No. 1257

(D)

B

Appropriation



B

Washington, D.C. February 28 1957 No. 1192

(D)

Pay to the order of

[REDACTED]

B

\$1,500.00

One thousand, five hundred

U.S. POSTAGE

AUTHORIZED SIGNATURE

C

B

Washington, D.C.

[REDACTED]

[REDACTED]

B

THIS CHECK IS VALID ONLY WHEN DEPOSITED IN A BANK OR OTHER INSTITUTION

[REDACTED]

B

1227

*Washington*

**B**  
[Redacted]

[Redacted]

[Redacted]

[Redacted]

2

2

*Washington*

E

**B**  
[Redacted]

[Redacted]

[Redacted]

B

[Redacted]

B

Washington, D.C. September 1957 No. 1305

D

[Redacted vertical text]

[Redacted lines of text] E E

On this... B

[Redacted lines of text] B

3

3

B

Washington, D.C. September 1957 No. 1305

[Redacted vertical text]

[Redacted lines of text] E

B

[Redacted lines of text] B

B

London (11/11) 1955

[REDACTED] E E

B

[REDACTED] B C

1332

1937 Nov

Washington, D.C.

E

Z

B

(D)

B

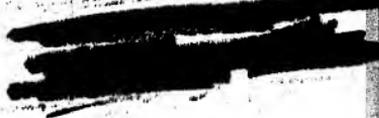
Pro...

By

FOR ENCLASSED

Pathology Dept. Research

B



DATE.		APPROVED.	Receipts	EXPENSES
21 Mar 59	FUNDS			
31 Mar 59	INVOICE #1		33333. <sup>00</sup>	1100000. <sup>00</sup>
25 May 59	INVOICE #2.		33000. <sup>00</sup>	
16 Sep 59	INVOICE #3		33667. <sup>00</sup>	
21 Feb 56	INVOICE #4		33000. <sup>00</sup>	100000. <sup>00</sup>
22 May 56	#5		33000. <sup>00</sup>	
10 Sep 56	#6		34000. <sup>00</sup>	
25 Jan 57	#7		33334. <sup>00</sup>	100000. <sup>00</sup>
3 May 57	#8		33333. <sup>33</sup>	
17 Oct 57	#9		33333. <sup>33</sup>	
28 Jan 58	#10		21733. <sup>33</sup>	69200. <sup>00</sup>
22 Apr 58	#11		21733. <sup>33</sup>	
22 Sep 58	#12		21733. <sup>33</sup>	
5 Feb 59	#13		35750. <sup>00</sup>	75260. <sup>00</sup>
11 Jun 59	#14		35750. <sup>00</sup>	
5 Jun 59	AUTHORIZATION #2.	3760. <sup>00</sup>		
21 Aug 59	#15.		3760. <sup>00</sup>	71500. <sup>00</sup>
4 Jan 60	#16.		23833. <sup>00</sup>	
13 Apr 60	#17.		23833. <sup>00</sup>	
11 Aug 60	#18.		23834. <sup>00</sup>	90000. <sup>00</sup>
7 Apr 61	#19.		20000. <sup>00</sup>	
5 Oct 61	#20.		20000. <sup>00</sup>	
13 Feb 61	#21		40000. <sup>00</sup>	
<p>* PROPOSED 5 JUNE 59          SENT TO FINANCE 5 JUNE 59          A RECEIVED FROM [REDACTED] C 10 July 59          [REDACTED] RECEIVED TO [REDACTED] C 10 Sept 59          INVOICE #15 21 Aug 59</p>				

45-46

1933  
000

6-2500-10-001

-15-

11 AUG 1933	Anthony's #3 Sub. 45	22,000.00		22,000.00
19 SEP 1933	James #3		22,000.00	
3 FEB 1934	Anthony's #4 Sub. 45	10,000.00		10,000.00
24 FEB 1934	James #4		22,000.00	22,000.00
24 MAR 1934	James #5		22,000.00	22,000.00
12 MAR 1934	James #6		22,000.00	

*big*



February 1958 - Through January 1959

RESEARCH GRANTS:

B	[REDACTED]	\$36,800.00	
	[REDACTED] Patient Hospitalization	1,000.00	\$37,800.00
	[REDACTED]		2,950.00
	[REDACTED]		<u>3,466.66</u> 344,212

SALARIES & FEES AND SOCIAL SECURITY:

Salaries and Fees	15,478.90	
Social Security	<u>302.21</u>	15,781.11

SUPPLIES AND SERVICES:

Special Chemicals:

B	[REDACTED]	\$ 630.00	
	[REDACTED]	217.80	
	[REDACTED]	1,325.68	
	[REDACTED]	<u>2,037.92</u>	4,262.00
	[REDACTED]	918.30	
	27.98	<u>946.28</u>	5,208.28

TOTAL EXPENDITURES

\$ 65,210

*This report supported by [REDACTED] the  
Collection of [REDACTED] should [REDACTED]*

B  
I certify that this is a true statement.

[REDACTED SIGNATURE] A [REDACTED]

45-43

REPORT OF EXPENDITURES

February 1, 1957 - January 31, 1958

Research Grants:

B	[REDACTED]	\$50,150.00	
	[REDACTED] Patient Hospitalization	<u>1,603.00</u>	\$51,755.00
	[REDACTED]		12,381.31
	[REDACTED]		<u>4,921.91</u> \$ 68,728.26
	Salaries, Fees and Social Security		16,917.65

Travel and Meetings:

C	[REDACTED]	\$183.87	
	[REDACTED]	282.38	
	[REDACTED]	249.73	
	[REDACTED]	267.60	
	[REDACTED]	360.17	
	[REDACTED]	<u>139.33</u>	1,869.26

Special Chemicals:

B	[REDACTED]	\$,280.00	
	[REDACTED]	2,326.21	
	[REDACTED]	870.80	
	[REDACTED]	517.40	
	[REDACTED]	<u>100.00</u>	
			9,894.41

Supplies:

B	[REDACTED]	1,633.83	
	[REDACTED]	211.00	
	[REDACTED]	222.02	
	[REDACTED]	131.76	
	[REDACTED]	<u>87.06</u>	
			<u>2,603.67</u>

Total

\$ 100,013.27

[REDACTED] A

[REDACTED] D

*und*

**Project:** MKU...GRA, Subproject 45

**Date Initiated:** March 1955

**Date Expires:** February 1962

**Funds-current year:** \$68,000.00

**Purpose:** To provide funds for consultative and out-out services in the medical field as well as to conduct research on the synthesis, pharmacodynamics analysis and clinical trial of new chemical agents.

**Status:** Several new Monocopy techniques are being tested in relation to chemical agents which stimulate the stress reaction in human beings.

*und*



[REDACTED]

B

FINANCIAL REPORT

INV 2/ February 1, 1962 to January 31, 1963

FUNDS RECEIVED		\$40,000.00
Grants In Aid	[REDACTED]	\$40,000.00

B

[REDACTED]

C

I have examined and approved the submitted expenditures.

[REDACTED]

A

WES/Chemical Div

Date: 7/2/63

45-42

[REDACTED]

B

FINANCIAL REPORT

INV 20  
INV 19

February 1, 1961 to January 31, 1962

FUNDS RECEIVED

\$40,000.00

Grants In Aid

[REDACTED]

B

\$41,000.00

[REDACTED]

I have examined and approved the enclosed statement of account.

[REDACTED]

Special Agent in Charge  
FBI Chemical Division

Date: 2/20/62

45-48

*M*

Date 23 July 1962

Branch RS Category Chemical and Physical Manipulations (V-2)

Project Title Knockout Materials Item Classification Through Secret

Project Crypto MSHILTRA Crypto Classification None

Branch Project No. R-102 Project Engineer [REDACTED]

Contractor [REDACTED]

*B*

Contract No. MSHILTRA #45 Task No. None

Type of Contract R&D Date Initiated February 1962

Cost \$40,000.00 Completion Date February 1963

Purpose: **This project involves the production and preliminary testing of materials which affect the "awareness" of human beings. The goal is a good "Mickey Finn."**

Status: **This project has been delayed by the loss of [REDACTED]. However, isolation and preliminary testing of a promising material first located by him are being carried out and preliminary feasibility should be established approximately on schedule.**

*C*

*M*

*M*  
ALL INFORMATION CONTAINED  
HEREIN IS UNCLASSIFIED  
DATE 11/19/01 BY 60322/UC/STP

45-49

B E [REDACTED] Oct 12 1961 No. 2293 E

[REDACTED]

Pay B [REDACTED] \$21,000

to the [REDACTED]

Twenty one thousand dollars and NO 100 Dollars

[REDACTED] E B [REDACTED] C

RESEARCH GRANT

AUTHORIZED SIGNATURE

STYLE 7

B E [REDACTED] April 27 1961 No. 2179 E

[REDACTED]

Pay B [REDACTED] \$25,000

to the [REDACTED]

Twenty five thousand dollars and NO 100 Dollars

[REDACTED] E B [REDACTED] C

N.E.

AUTHORIZED SIGNATURE

STYLE 7

RECEIPT

Receipt is hereby acknowledged of the following:

Cashier's Check No. OSC 578 in the amount of \$40,000, dated  
February 28, 1962, drawn on [REDACTED] E  
[REDACTED], payable to [REDACTED] B

E

[REDACTED]

C

Date:

3/7/62

45-51

13 February 1962

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

SUBJECT : MKULTRA, Subproject 45, Invoice #21,  
Allotment 2125-1390-3902

1. Invoice No. 21 is attached covering the above subproject. Payment should be made as follows:

*E* Cashier's check in the amount of \$40,000.00 drawn *B*  
*B* on a [redacted] bank, payable to [redacted]

2. The check should be forwarded to Chief, TSD/Research Branch, through TSD/Budget Officer as soon as possible.

3. This is a final invoice. However, since it is anticipated that additional funds will be obligated for this project the files should not be closed.

*E* [redacted] *E*  
CHECK# [redacted] IN THE AMOUNT OF \$ 40,000.00.  
RECEIVED. [redacted] *A*  
*A* [redacted] 7 Mar 62

[redacted] *A*  
Chief  
TSD/Research Branch

Attachment:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee  
1 - TSD/FASS  
2 - TSD/RB

I CERTIFY THAT FUNDS ARE AVAILABLE  
OBLIGATION REFERENCE NO. 614  
CHARGE TO ALLOTMENT NO. 2125-1390-3902  
\_\_\_\_\_  
AUTHORIZING OFFICER

*A* TSD/RB/[redacted] (13 Feb 62)

45-57

~~SECRET~~

13 February 1962

INVOICE

For Services

\$40,000.00

.....  B

CERTIFICATIONS

(1) It is hereby certified that this is invoice 21 applying to Sub-project No. 45 of MKULTRA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSD/RB, that this bill is just and correct and that payment thereof has not yet been made.

Chief, TSD/Research Branch

Date: 13 February 1962

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum of 13 April 1961 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

.....

~~SECRET~~

6 February 1962

MEMORANDUM FOR: THE RECORD

SUBJECT : Continuation of MKULTRA, Subproject No. 45

1. The scope of this subproject includes all those activities now engaged in by [REDACTED] B under the direction of TSD/RB with the exception of those cutout functions specifically mentioned in connection with other MKULTRA subprojects. In general, the research effort under this subproject will continue along the lines laid down in previous years. These involve the synthesis and pharmacological and clinical evaluation of compounds of those chemical families known to have application in the psychochemical and "K" fields. During the coming year it is planned to concentrate more directly on the more practical aspects of the "knockout" problem. Enough new potent substances have become available lately to make such a change in emphasis worthwhile. In connection with this change it should be noted that certain findings made in C [REDACTED] project at [REDACTED] which cannot be further exploited at B that facility will be pursued at [REDACTED] in the future. For this reason it may be necessary to supplement the findings of this subproject from time to time during the year due to increases of scope.

C 2. [REDACTED] also serves as a general consultant to the Agency, provides services of a sensitive nature on an ad hoc basis, and serves as a cutout in procurement problems.

*[Handwritten signature]*

Downgraded to: ~~CONFIDENTIAL~~  
by authority of 187475  
date June 1977  
E2 IMPDET; CL BY 187475

3. The total cost of this project for a period of one year will not exceed \$40,000.00. Charges should be made against Allotment 2125-1390-3902.

e 4. [redacted] has been requested to submit a summary accounting or a copy of the Fund's annual audit report for the sponsor's inspection. Also, it has been requested that any unexpended funds shall be returned to the Agency.

5. Title to any permanent equipment purchased by funds granted e [redacted] shall be retained by [redacted] B  
B [redacted] in lieu of higher overhead rates.

6. It was mutually agreed that documentation and accounting for travel expenses which are normally reimbursable by [redacted] B shall conform with the accepted practices of the Fund.

[redacted] A  
Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:

[redacted] A  
\_\_\_\_\_  
Research Director

Date \_\_\_\_\_

Attachment: Proposal and Budget

Distribution: Original only

Downgraded to: ~~CONFIDENTIAL~~  
by authority of 187475  
date June 1977  
E2 IMPDET; CL BY 187475

[Handwritten signature]

B

PROPOSAL 1962

It is proposed to continue exploration and pilot work along lines which have been developed in the investigations of the past few years in cooperation with other projects of interest to the Sponsor. The primary field of work involves the effects of stress on human beings. Major items of interest presently involve the following areas:

- (a) Creation of reliable research "tools" for study of stress phenomena in animals and man with the end in view of understanding these phenomena to the extent that practical applications can be realized in interpreting and controlling human behavior.
- (b) The production and study of new chemical and physical agents of significance in connection with the stress reactions.
- (c) The allied investigation of chemical and physical agents related to the "state of awareness" of human beings. The particular interest in this relationship is to obtain and define a separation between general activation or depression of the whole animal and the very specific "perceptual" depression or activation desirable from the psychologists' point of view.

A reasonable amount of progress is being made in the several areas indicated above and it is expected that continued efforts of the sort which have proved efficacious in the past year will yield further significant results.

**WARNING NOTICE**  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

45-52

[REDACTED] B

BUDGET 1962

Salaries	\$ 30,500.00
Chemical Supplies	2,000.00
Experimental Animals and Subjects	5,000.00
Clerical Support	<u>2,500.00</u>
TOTAL	\$ 40,000.00

WARNING NOTICE  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

SECRET

Date: 8 February 1968

MEMORANDUM FOR: THE COMPTROLLER

ATTENTION : Finance Division

SUBJECT : MKULTRA, Subproject <sup>45</sup>  
Allotment # 2125-1350-3902

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 45 has been approved, and \$40,000.00 of the over-all Project MKULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 2125-1350-3902

  
Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION  
OF FUNDS:

\_\_\_\_\_  
Research Director

Date: \_\_\_\_\_

Distribution:

Original & 2 - Addressee

1 - TSD/PASS

2 - TSD/RB

SECRET



SECRET

44-53  
Date: 5 October 1961

MEMORANDUM FOR: THE COMPTROLLER

ATTENTION : Finance Division

SUBJECT : MKULTRA, Subproject 45

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 45 has been approved, and 20,000.00 of the over-all Project MKULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 3125-1090-1903

  
Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION  
OF FUNDS:

Research Director

I CERTIFY THAT FUNDS ARE AVAILABLE  
OBLIGATION REFERENCE NO. 612  
CHARGE TO ACCOUNT NO. \_\_\_\_\_

APPROVING OFFICER

Date: \_\_\_\_\_

Distribution:

- Original & 2 - Addressee
- 1 - TSD/FASS
- 2 - TSD/RB

SECRET

SECRET

95-56

Date: 8 February 1962

MEMORANDUM FOR: THE COMPTROLLER

ATTENTION : Finance Division

SUBJECT : MKULTRA, Subproject 45  
Allotment # 2125-1350-3502

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 45 has been approved, and \$40,000.00 of the over-all Project MKULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 2125-1350-3502

A [REDACTED]  
Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:

A [REDACTED]  
Research Director

Date:                     

I CERTIFY THAT FUNDS ARE AVAILABLE  
OBLIGATION REFERENCE NO.                       
DISAC TO ALLOTMENT NO.                       
AUTHORIZING OFFICER

Distribution:  
Original & 2 - Addresses  
X - TSD/FASS  
2 - TSD/RB

SECRET

RECEIPT

Receipt is hereby acknowledged of the following:

Treasurer's Check No. 186234 in the amount of \$20,000, dated  
11 October 1961, drawn on [REDACTED]

E  
B

[REDACTED]

payable to

E  
B

C

[REDACTED]

Date; Oct 11, 1961

Downgraded to: CONFIDENTIAL  
by authority of: 187475  
Date: June 1977

E2 IMPDET; CL BY 187475

45-58  
A  
31 March 1961

MEMORANDUM FOR: THE RECORD

SUBJECT : Continuation of MKULTRA, Subproject No. 45

1. The scope of this subproject includes all those activities now engaged in by [REDACTED] B under the direction of TSD/RB with the exception of those cutout functions specifically mentioned in connection with other MKULTRA subprojects. In general, the research effort under this subproject will continue along the lines laid down in previous years. These involve the synthesis and pharmacological and clinical evaluation of compounds of those chemical families known to have application in the psychochemical and "K" fields. During the past year important progress has been made in the area related to stressor compounds and the relationship of these materials to the physiological pathways through which both stress and the reaction to it are mediated in human beings. Also, several new and important animal screening techniques adapted to the study of materials which depress the general awareness of animals without producing any accompanying physical depression have been made available for work on "knockout" materials. In addition, some progress has been made in relating certain organic chemical structures to observed effects on animals. A considerable part of next year's effort will be aimed at extending our ability to understand the structure-activity relationships among these sleep-producing materials.

Downgraded to: CONFIDENTIAL  
by authority of: 187475  
Date: June 1977

E2 IMPDET; CL BY 187475

Downgraded to: CONFIDENTIAL

by authority of: 187475

Date: June 1977

R2 IMPDET; CM BY 187475

2. [redacted] also serves as a general consultant to the Agency, provides services of a sensitive nature on an ad hoc basis, and serves as a cutout in procurement problems.

3. The total cost of this project for a period of one year will not exceed \$40,000.00. (However, at the present time the project will only be extended for a period of <sup>SIX</sup> months. The cost of this project for this period will not exceed \$20,000.00.) Charges should be made against Allotment 1125-1390-3902. (It is anticipated that the remainder of the funds for the project year will be made available from FY-62 money when available.)

4. [redacted] has been requested to submit a summary accounting or a copy of [redacted] annual audit report for the sponsor's inspection. Also, it has been requested that any unexpended funds shall be returned to the Agency.

5. Title to any permanent equipment purchased by funds granted

[redacted] shall be retained by [redacted] in lieu of higher overhead rates.

6. It was mutually agreed that documentation and accounting for travel expenses which are normally reimbursable by [redacted] shall conform with the accepted practices of [redacted]

APPROVED FOR OBLIGATION OF FUNDS:

[redacted] Research Director  
Date \_\_\_\_\_

[redacted] Chief TSD/Research Branch

APPROVED FOR ADDITIONAL OBLIGATION OF FUNDS: (\$20,000.00 against Allotment 2125-1390-3902

[redacted] Research Director  
Date \_\_\_\_\_

Downgraded to: CONFIDENTIAL  
by authority of: 187475  
Date: June 1977  
R2 IMPDET; CM BY 187475

PROPOSAL 1961

It is proposed to continue exploration and pilot work along lines which have been developed in the investigations of the past few years in cooperation with other projects of interest to the Sponsor. The primary field of work involves the effects of stress on human beings. Major items of interest presently involve the following areas:

- a) Creation of reliable research "tools" for study of stress phenomena in animals and man with the end in view of understanding these phenomena to the extent that practical applications can be realized in interpreting and controlling human behavior.
- b) The production and study of new chemical and physical agents of significance in connection with the stress reactions.
- c) The allied investigation of chemical and physical agents related to the "state of awareness" of human beings. The particular interest in this relationship is to obtain and define a separation between general activation or depression of the whole animal and the very specific "perceptual" depression or activation desirable from the psychologists' point of view.

A reasonable amount of progress is being made in the several areas indicated above and it is expected that continued efforts of the sort which have proved efficacious in the past year will yield further significant results.

As indicated in the attached budget, the total research effort will amount to \$71,500.00. We are requesting that the present Sponsor fund only \$40,000.00 of this effort with the remainder to be provided from private sources.

2 [REDACTED]

**WARNING NOTICE**  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

RESEARCH PROPOSAL 1961

BUDGET

1. PHARMACOLOGY AND TOXICOLOGY

Pharmacologist and technician \$12,000.00

C [REDACTED] \$10,000.00

Animal caretaker, animals & animal maintenance \$12,000.00

\$34,000.00

2. CLINICAL SCREENING

Clinical assistance \$12,000.00

Clerical help and supplies \$5,000.00

\$17,000.00

3. CHEMICAL SYNTHESIS

S [REDACTED] Consultant \$1,500.00

C [REDACTED] \$5,000.00

C [REDACTED] \$10,000.00

\$16,500.00

Chemical Supplies \$4,000.00

\$4,000.00

TOTAL

\$71,500.00

**WARNING NOTICE**  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED





SECRET

INVOICE

For Services

5 October 1961

20,000.00



*Forwarded  
9 Oct 61*

CERTIFICATIONS

(1) It is hereby certified that this is invoice 20 applying to Sub-project No. 45 of MKULTRA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSD/RB, that this bill is just and correct and that payment thereof has not yet been made.

Chief, TSD/Research Branch

Date: \_\_\_\_\_

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum of 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date: \_\_\_\_\_

45-62

SECRET

Date: 8 October 1961

MEMORANDUM FOR: THE COMPTROLLER  
ATTENTION : Finance Division  
SUBJECT : MKULTRA, Subproject 45

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 45 has been approved, and 20,000.00 of the over-all Project MKULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 2125-1378-3702.

~~XXXXXXXXXXXXXXXXXXXX~~  
A  
TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:

\_\_\_\_\_  
Research Director

Date: \_\_\_\_\_

Distribution:  
Original & 2 - Addressee  
1 - TSD/FASS  
2 - TSD/RB

SECRET

4/15

RECEIPT

Receipt is hereby acknowledged of the following:

<sup>E</sup> [REDACTED] in the amount of \$20,000, dated  
14 April 1961, drawn on the [REDACTED]  
[REDACTED], payable to the [REDACTED] <sup>B</sup>

[REDACTED] <sup>A</sup>  
Date 4/17/61 <sup>C</sup>



45-65

SECRET

DATE: 31 March 1961

MEMORANDUM FOR : THE COMPTROLLER  
ATTENTION : Finance Division  
SUBJECT : MKULTRA, Subproject 45

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 45 has been approved, and \$50,000.00 of the over-all Project MKULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 1125-1390-3902.

~~XXXXXXXXXX~~ A  
Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:  
~~XXXXXXXXXX~~ A  
Research Director

6 1667  
I CERTIFY THAT FUNDS ARE AVAILABLE  
OBLIGATION REFERENCE NO. 1125  
CHARGE TO ALLOTMENT NO. \_\_\_\_\_  
AUTHORIZING OFFICER

Date:  
Distribution:  
Orig. & 2 - Addressees

SECRET

Form 10-59 (Rev. 1-59)

CONFIDENTIAL FUNDS POSTING VOUCHER

VOUCHER NO. 7-12		DATE 2-6		VOUCHER NO. 7-12	
DESCRIPTION-ALL OTHER ACCOUNTS 13-23	34-38 74-75 76-77 78-79 80-81 82-83 84-85 86-87 88-89 90-91 92-93 94-95 96-97 98-99 100-101 102-103 104-105 106-107 108-109 110-111 112-113 114-115 116-117 118-119 120-121 122-123 124-125 126-127 128-129 130-131 132-133 134-135 136-137 138-139 140-141 142-143 144-145 146-147 148-149 150-151 152-153 154-155 156-157 158-159 160-161 162-163 164-165 166-167 168-169 170-171 172-173 174-175 176-177 178-179 180-181 182-183 184-185 186-187 188-189 190-191 192-193 194-195 196-197 198-199 200-201 202-203 204-205 206-207 208-209 210-211 212-213 214-215 216-217 218-219 220-221 222-223 224-225 226-227 228-229 230-231 232-233 234-235 236-237 238-239 240-241 242-243 244-245 246-247 248-249 250-251 252-253 254-255 256-257 258-259 260-261 262-263 264-265 266-267 268-269 270-271 272-273 274-275 276-277 278-279 280-281 282-283 284-285 286-287 288-289 290-291 292-293 294-295 296-297 298-299 300-301 302-303 304-305 306-307 308-309 310-311 312-313 314-315 316-317 318-319 320-321 322-323 324-325 326-327 328-329 330-331 332-333 334-335 336-337 338-339 340-341 342-343 344-345 346-347 348-349 350-351 352-353 354-355 356-357 358-359 360-361 362-363 364-365 366-367 368-369 370-371 372-373 374-375 376-377 378-379 380-381 382-383 384-385 386-387 388-389 390-391 392-393 394-395 396-397 398-399 400-401 402-403 404-405 406-407 408-409 410-411 412-413 414-415 416-417 418-419 420-421 422-423 424-425 426-427 428-429 430-431 432-433 434-435 436-437 438-439 440-441 442-443 444-445 446-447 448-449 450-451 452-453 454-455 456-457 458-459 460-461 462-463 464-465 466-467 468-469 470-471 472-473 474-475 476-477 478-479 480-481 482-483 484-485 486-487 488-489 490-491 492-493 494-495 496-497 498-499 500-501 502-503 504-505 506-507 508-509 510-511 512-513 514-515 516-517 518-519 520-521 522-523 524-525 526-527 528-529 530-531 532-533 534-535 536-537 538-539 540-541 542-543 544-545 546-547 548-549 550-551 552-553 554-555 556-557 558-559 560-561 562-563 564-565 566-567 568-569 570-571 572-573 574-575 576-577 578-579 580-581 582-583 584-585 586-587 588-589 590-591 592-593 594-595 596-597 598-599 600-601 602-603 604-605 606-607 608-609 610-611 612-613 614-615 616-617 618-619 620-621 622-623 624-625 626-627 628-629 630-631 632-633 634-635 636-637 638-639 640-641 642-643 644-645 646-647 648-649 650-651 652-653 654-655 656-657 658-659 660-661 662-663 664-665 666-667 668-669 670-671 672-673 674-675 676-677 678-679 680-681 682-683 684-685 686-687 688-689 690-691 692-693 694-695 696-697 698-699 700-701 702-703 704-705 706-707 708-709 710-711 712-713 714-715 716-717 718-719 720-721 722-723 724-725 726-727 728-729 730-731 732-733 734-735 736-737 738-739 740-741 742-743 744-745 746-747 748-749 750-751 752-753 754-755 756-757 758-759 760-761 762-763 764-765 766-767 768-769 770-771 772-773 774-775 776-777 778-779 780-781 782-783 784-785 786-787 788-789 790-791 792-793 794-795 796-797 798-799 800-801 802-803 804-805 806-807 808-809 810-811 812-813 814-815 816-817 818-819 820-821 822-823 824-825 826-827 828-829 830-831 832-833 834-835 836-837 838-839 840-841 842-843 844-845 846-847 848-849 850-851 852-853 854-855 856-857 858-859 860-861 862-863 864-865 866-867 868-869 870-871 872-873 874-875 876-877 878-879 880-881 882-883 884-885 886-887 888-889 890-891 892-893 894-895 896-897 898-899 900-901 902-903 904-905 906-907 908-909 910-911 912-913 914-915 916-917 918-919 920-921 922-923 924-925 926-927 928-929 930-931 932-933 934-935 936-937 938-939 940-941 942-943 944-945 946-947 948-949 950-951 952-953 954-955 956-957 958-959 960-961 962-963 964-965 966-967 968-969 970-971 972-973 974-975 976-977 978-979 980-981 982-983 984-985 986-987 988-989 990-991 992-993 994-995 996-997 998-999 1000-1001 1002-1003 1004-1005 1006-1007 1008-1009 1010-1011 1012-1013 1014-1015 1016-1017 1018-1019 1020-1021 1022-1023 1024-1025 1026-1027 1028-1029 1030-1031 1032-1033 1034-1035 1036-1037 1038-1039 1040-1041 1042-1043 1044-1045 1046-1047 1048-1049 1050-1051 1052-1053 1054-1055 1056-1057 1058-1059 1060-1061 1062-1063 1064-1065 1066-1067 1068-1069 1070-1071 1072-1073 1074-1075 1076-1077 1078-1079 1080-1081 1082-1083 1084-1085 1086-1087 1088-1089 1090-1091 1092-1093 1094-1095 1096-1097 1098-1099 1100-1101 1102-1103 1104-1105 1106-1107 1108-1109 1110-1111 1112-1113 1114-1115 1116-1117 1118-1119 1120-1121 1122-1123 1124-1125 1126-1127 1128-1129 1130-1131 1132-1133 1134-1135 1136-1137 1138-1139 1140-1141 1142-1143 1144-1145 1146-1147 1148-1149 1150-1151 1152-1153 1154-1155 1156-1157 1158-1159 1160-1161 1162-1163 1164-1165 1166-1167 1168-1169 1170-1171 1172-1173 1174-1175 1176-1177 1178-1179 1180-1181 1182-1183 1184-1185 1186-1187 1188-1189 1190-1191 1192-1193 1194-1195 1196-1197 1198-1199 1200-1201 1202-1203 1204-1205 1206-1207 1208-1209 1210-1211 1212-1213 1214-1215 1216-1217 1218-1219 1220-1221 1222-1223 1224-1225 1226-1227 1228-1229 1230-1231 1232-1233 1234-1235 1236-1237 1238-1239 1240-1241 1242-1243 1244-1245 1246-1247 1248-1249 1250-1251 1252-1253 1254-1255 1256-1257 1258-1259 1260-1261 1262-1263 1264-1265 1266-1267 1268-1269 1270-1271 1272-1273 1274-1275 1276-1277 1278-1279 1280-1281 1282-1283 1284-1285 1286-1287 1288-1289 1290-1291 1292-1293 1294-1295 1296-1297 1298-1299 1300-1301 1302-1303 1304-1305 1306-1307 1308-1309 1310-1311 1312-1313 1314-1315 1316-1317 1318-1319 1320-1321 1322-1323 1324-1325 1326-1327 1328-1329 1330-1331 1332-1333 1334-1335 1336-1337 1338-1339 1340-1341 1342-1343 1344-1345 1346-1347 1348-1349 1350-1351 1352-1353 1354-1355 1356-1357 1358-1359 1360-1361 1362-1363 1364-1365 1366-1367 1368-1369 1370-1371 1372-1373 1374-1375 1376-1377 1378-1379 1380-1381 1382-1383 1384-1385 1386-1387 1388-1389 1390-1391 1392-1393 1394-1395 1396-1397 1398-1399 1400-1401 1402-1403 1404-1405 1406-1407 1408-1409 1410-1411 1412-1413 1414-1415 1416-1417 1418-1419 1420-1421 1422-1423 1424-1425 1426-1427 1428-1429 1430-1431 1432-1433 1434-1435 1436-1437 1438-1439 1440-1441 1442-1443 1444-1445 1446-1447 1448-1449 1450-1451 1452-1453 1454-1455 1456-1457 1458-1459 1460-1461 1462-1463 1464-1465 1466-1467 1468-1469 1470-1471 1472-1473 1474-1475 1476-1477 1478-1479 1480-1481 1482-1483 1484-1485 1486-1487 1488-1489 1490-1491 1492-1493 1494-1495 1496-1497 1498-1499 1500-1501 1502-1503 1504-1505 1506-1507 1508-1509 1510-1511 1512-1513 1514-1515 1516-1517 1518-1519 1520-1521 1522-1523 1524-1525 1526-1527 1528-1529 1530-1531 1532-1533 1534-1535 1536-1537 1538-1539 1540-1541 1542-1543 1544-1545 1546-1547 1548-1549 1550-1551 1552-1553 1554-1555 1556-1557 1558-1559 1560-1561 1562-1563 1564-1565 1566-1567 1568-1569 1570-1571 1572-1573 1574-1575 1576-1577 1578-1579 1580-1581 1582-1583 1584-1585 1586-1587 1588-1589 1590-1591 1592-1593 1594-1595 1596-1597 1598-1599 1600-1601 1602-1603 1604-1605 1606-1607 1608-1609 1610-1611 1612-1613 1614-1615 1616-1617 1618-1619 1620-1621 1622-1623 1624-1625 1626-1627 1628-1629 1630-1631 1632-1633 1634-1635 1636-1637 1638-1639 1640-1641 1642-1643 1644-1645 1646-1647 1648-1649 1650-1651 1652-1653 1654-1655 1656-1657 1658-1659 1660-1661 1662-1663 1664-1665 1666-1667 1668-1669 1670-1671 1672-1673 1674-1675 1676-1677 1678-1679 1680-1681 1682-1683 1684-1685 1686-1687 1688-1689 1690-1691 1692-1693 1694-1695 1696-1697 1698-1699 1700-1701 1702-1703 1704-1705 1706-1707 1708-1709 1710-1711 1712-1713 1714-1715 1716-1717 1718-1719 1720-1721 1722-1723 1724-1725 1726-1727 1728-1729 1730-1731 1732-1733 1734-1735 1736-1737 1738-1739 1740-1741 1742-1743 1744-1745 1746-1747 1748-1749 1750-1751 1752-1753 1754-1755 1756-1757 1758-1759 1760-1761 1762-1763 1764-1765 1766-1767 1768-1769 1770-1771 1772-1773 1774-1775 1776-1777 1778-1779 1780-1781 1782-1783 1784-1785 1786-1787 1788-1789 1790-1791 1792-1793 1794-1795 1796-1797 1798-1799 1800-1801 1802-1803 1804-1805 1806-1807 1808-1809 1810-1811 1812-1813 1814-1815 1816-1817 1818-1819 1820-1821 1822-1823 1824-1825 1826-1827 1828-1829 1830-1831 1832-1833 1834-1835 1836-1837 1838-1839 1840-1841 1842-1843 1844-1845 1846-1847 1848-1849 1850-1851 1852-1853 1854-1855 1856-1857 1858-1859 1860-1861 1862-1863 1864-1865 1866-1867 1868-1869 1870-1871 1872-1873 1874-1875 1876-1877 1878-1879 1880-1881 1882-1883 1884-1885 1886-1887 1888-1889 1890-1891 1892-1893 1894-1895 1896-1897 1898-1899 1900-1901 1902-1903 1904-1905 1906-1907 1908-1909 1910-1911 1912-1913 1914-1915 1916-1917 1918-1919 1920-1921 1922-1923 1924-1925 1926-1927 1928-1929 1930-1931 1932-1933 1934-1935 1936-1937 1938-1939 1940-1941 1942-1943 1944-1945 1946-1947 1948-1949 1950-1951 1952-1953 1954-1955 1956-1957 1958-1959 1960-1961 1962-1963 1964-1965 1966-1967 1968-1969 1970-1971 1972-1973 1974-1975 1976-1977 1978-1979 1980-1981 1982-1983 1984-1985 1986-1987 1988-1989 1990-1991 1992-1993 1994-1995 1996-1997 1998-1999 2000-2001 2002-2003 2004-2005 2006-2007 2008-2009 2010-2011 2012-2013 2014-2015 2016-2017 2018-2019 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 2030-2031 2032-2033 2034-2035 2036-2037 2038-2039 2040-2041 2042-2043 2044-2045 2046-2047 2048-2049 2050-2051 2052-2053 2054-2055 2056-2057 2058-2059 2060-2061 2062-2063 2064-2065 2066-2067 2068-2069 2070-2071 2072-2073 2074-2075 2076-2077 2078-2079 2080-2081 2082-2083 2084-2085 2086-2087 2088-2089 2090-2091 2092-2093 2094-2095 2096-2097 2098-2099 2100-2101 2102-2103 2104-2105 2106-2107 2108-2109 2110-2111 2112-2113 2114-2115 2116-2117 2118-2119 2120-2121 2122-2123 2124-2125 2126-2127 2128-2129 2130-2131 2132-2133 2134-2135 2136-2137 2138-2139 2140-2141 2142-2143 2144-2145 2146-2147 2148-2149 2150-2151 2152-2153 2154-2155 2156-2157 2158-2159 2160-2161 2162-2163 2164-2165 2166-2167 2168-2169 2170-2171 2172-2173 2174-2175 2176-2177 2178-2179 2180-2181 2182-2183 2184-2185 2186-2187 2188-2189 2190-2191 2192-2193 2194-2195 2196-2197 2198-2199 2200-2201 2202-2203 2204-2205 2206-2207 2208-2209 2210-2211 2212-2213 2214-2215 2216-2217 2218-2219 2220-2221 2222-2223 2224-2225 2226-2227 2228-2229 2230-2231 2232-2233 2234-2235 2236-2237 2238-2239 2240-2241 2242-2243 2244-2245 2246-2247 2248-2249 2250-2251 2252-2253 2254-2255 2256-2257 2258-2259 2260-2261 2262-2263 2264-2265 2266-2267 2268-2269 2270-2271 2272-2273 2274-2275 2276-2277 2278-2279 2280-2281 2282-2283 2284-2285 2286-2287 2288-2289 2290-2291 2292-2293 2294-2295 2296-2297 2298-2299 2300-2301 2302-2303 2304-2305 2306-2307 2308-2309 2310-2311 2312-2313 2314-2315 2316-2317 2318-2319 2320-2321 2322-2323 2324-2325 2326-2327 2328-2329 2330-2331 2332-2333 2334-2335 2336-2337 2338-2339 2340-2341 2342-2343 2344-2345 2346-2347 2348-2349 2350-2351 2352-2353 2354-2355 2356-2357 2358-2359 2360-2361 2362-2363 2364-2365 2366-2367 2368-2369 2370-2371 2372-2373 2374-2375 2376-2377 2378-2379 2380-2381 2382-2383 2384-2385 2386-2387 2388-2389 2390-2391 2392-2393 2394-2395 2396-2397 2398-2399 2400-2401 2402-2403 2404-2405 2406-2407 2408-2409 2410-2411 2412-2413 2414-2415 2416-2417 2418-2419 2420-2421 2422-2423 2424-2425 2426-2427 2428-2429 2430-2431 2432-2433 2434-2435 2436-2437 2438-2439 2440-2441 2442-2443 2444-2445 2446-2447 2448-2449 2450-2451 2452-2453 2454-2455 2456-2457 2458-2				

SECRET

45-67  
DATE: 31 March 1961

MEMORANDUM FOR : THE CONTROLLER  
ATTENTION : Finance Division  
SUBJECT : MKULERA, Subproject 45

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 45 has been approved, and \$2,000.00 of the over-all Project MKULERA funds have been obligated to cover the subproject's expenses and should be charged to cost center 1125-1390-3902.

~~XXXXXXXXXX~~ J  
Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION  
OF FUNDS:

~~XXXXXXXXXX~~ ✓  
Research Director

Date:

Distribution:  
Orig. & 2 - Addressee

SECRET

4347

SECRET

45-68

7 April 1961

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

SUBJECT : MEXLERA, Subproject 45, Invoice No. 19  
Allotment 1125-1390-3902

1. Invoice No. 19 covering the above subproject is attached. Payment should be made as follows:

Cashier's check in the amount of \$20,000.00 drawn on a local bank.

The check should be made payable to the ~~████████████████████~~ **B**

2. The check should be forwarded to Chief, TSD/Research Branch, through TSD/Budget Officer, no later than Thursday, 13 April 1961.

3. This is a final invoice. However, since it is anticipated that additional funds will be obligated for this project the files should not be closed.

~~████████████████████~~ **A**  
Chief  
TSD/Research Branch

Attachments:  
Invoice & Certifications

Distributions:  
Orig & 2 - Addressee

~~1~~ - TSD/FASB  
~~1~~ - TSD/RB

TSD/RB/~~██████████~~ (7 April 1961)

CHECK # 26558  
RECEIVED IN THE AMOUNT OF \$20,000.  
~~████████████████████~~

45-68

SECRET

INVOICE

For Services

**B**  
\$20,000.00

SECRET/NOFORN

(1) It is hereby certified that this is invoice 19 applying to sub-project No. 15 of MUMSIRA, that performance is satisfactory, that services are being accomplished in accordance with verbal agreements, that a detailed status of the payments and receipts is on file in TBU/PI, that this bill is just and correct and that payment thereon has not yet been made.

SECRET, NO/Secreted Status

Date: 7 April 1961

(2) It is hereby certified that this invoice applies to SubProject of MUMSIRA which was duly approved, and that the project is being carried out in accordance with the memorandum of 13 April 1959 from the DIT to the DD/A, and the extension of this authority in subsequent memoranda.

SECRET/NOFORN

Date: \_\_\_\_\_

SECRET

45-69

SECRET

DATE: 31 March 1961

MEMORANDUM FOR : THE COMPTROLLER  
ATTENTION : Finance Division  
SUBJECT : MKULERA, Subproject 45

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 45 has been approved, and \$20,000.00 of the over-all Project MKULERA funds have been obligated to cover the subproject's expenses and should be charged to cost center 1125-1390-3902.

~~\_\_\_\_\_~~  
Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION  
OF FUNDS:

Research Director

Date:

Distribution:  
Orig. & 2 - Addressee

SECRET



FINANCIAL REPORT JANUARY 31, 1960 - FEBRUARY 1, 1961

SALARIES		\$16,546.95
SUPPLIES & MATERIALS		\$7,312.76
GRANTS IN AID		
	<b>B:</b> [REDACTED]	\$33,600.00
	[REDACTED]	\$12,433.87
	[REDACTED]	<u>733.33</u>
		\$47,767.20 ✓
TOTAL		\$71,726.91

I certify to the best of my knowledge that this statement is correct.



Date 10/20/61

4 Jan 1960	23833	Jan 16
13 Apr -	23833	" 17
11 Aug 1960	23834	" 18
	<u>71500</u>	

I have examined and approved the submitted expenditures...



Chief  
TSS, Chemical Division

Date: 12/2/61

2

RECEIPT

Receipt is hereby acknowledged of the following:

E- [REDACTED] No. 01-3215 in the amount of \$23,834.00 E

drawn on [REDACTED] payable

to the [REDACTED]

[REDACTED]

Date 8/26/60

1 SECRET

45-72

11 August 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

SUBJECT : MEXLTRA, Subproject 45, Invoice No. 18  
Allotment 0525-1009-4902

1. Invoice No. 18 covering the above subproject is attached. Payment should be made as follows:

Cashier's check in the amount of \$23,834.00 drawn on a ██████████ bank.

The check should be made payable to the ██████████ ██████████ *B*

2. The check should be forwarded to Chief, TSD/Research Branch, through TSD/Budget Officer, no later than Thursday, 25 August 1960.

3. This is a final invoice. However, since it is anticipated that additional funds will be obligated for this project the files should not be closed.

██████████ *A*  
Chief  
TSD/Research Branch

Attachment:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee  
1 - TSD/FASB

I CERTIFY THAT FUNDS ARE AVAILABLE *16 1960*  
OBLIGATION REFERENCE NO. 128  
CHARGE TO ALLOTMENT NO. 0525-1009-4912

\_\_\_\_\_  
AUTHORIZING OFFICER

25 AUG 1960 CHECK# \_\_\_\_\_ IN THE AMOUNT OF \$23,834.00 RECEIVED. *E*

SECRET





45-74

RECEIPT

Acknowledged herewith receipt of the following check:

Official Check No. <sup>E</sup> ~~██████████~~ dated April 21, 1960, in the amount <sup>E</sup>

of ~~██████████~~ drawn on ~~██████████~~

payable to ~~██████████~~ B. <sup>E</sup>

~~██████████~~

Date:



45-75  
SECRET

INVOICE

For Services

\$23,833.00

[REDACTED]

B

-----  
CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 17 applying to Subproject 45 of MKULTRA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSD/CB, that this bill is just and correct and that payment thereof has not yet been made.

\_\_\_\_\_  
G/TSD/Chemical Branch

Date: \_\_\_\_\_

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

\_\_\_\_\_  
Research Director

Date: \_\_\_\_\_

SECRET

45-76

B

*[Handwritten signature]*

RECEIPT

Acknowledged herewith receipt of the following check:

*[Redacted]* Check No. 038925, dated 13 January 1960, in the amount of \$23,833.00, drawn on The *[Redacted]*, payable to *[Redacted]*

*[Redacted]*

DATE 1/20/60

SECRET

45-77

4 January 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : MKULTRA, Subproject 45, Invoice No. 16  
Allotment 0525-1009-4902

1. Invoice No. 16 covering the above subproject is attached. Other invoices will follow. Payment should be made as follows:

Cashier's check in the amount of \$23,833.00 drawn on a ~~check~~

The check should be made payable to the ~~Government~~

2. The check should be forwarded to Chief, TSS/Chemical Division, through TSS/Budget Officer, no later than 18 January 1960.

~~████████████████████~~  
Chief  
TSS/Chemical Division

Attachment:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee

1 - TSS/FASB  
2 - TSS/CD

E ~~████████████████████~~

I CERTIFY THAT FUNDS ARE AVAILABLE.  
OBLIGATION REFERENCE NO. ~~████████████████████~~  
CHARGE TO ALLOTMENT NO. ~~████████████████████~~

AUTHORIZING OFFICER

CHECK ~~████████~~ IN THE AMOUNT OF \$23,833.00  
RECEIVED.

18 JAN 1960

~~████████████████████~~

SECRET



Downgraded to: ~~CONFIDENTIAL~~  
by authority of: 187475  
date: June 1977

~~TOP SECRET~~  
~~TOP SECRET~~

45-78

E2 IMPDET; CL BY 187475

29 December 1959

MEMORANDUM FOR: THE RECORD

SUBJECT : Continuation of MKULTRA, Subproject No. 45

1. The scope of this subproject includes all those activities now engaged in by ~~TSB~~<sup>B</sup> under the direction of TSS/CD with the exception of those cutout functions specifically mentioned in connection with other MKULTRA subprojects. In general, the research effort under this subproject will continue along the lines laid down in previous years. These involve the synthesis and pharmacological and clinical evaluation of compounds of those chemical families known to have application in the psychochemical and "K" fields. During the past year important progress has been made in the area related to stressor compounds and the relationship of these materials to the physiological pathways through which both stress and the reaction to it are mediated in human beings. || As is indicated in the attached proposal, the work of the past year has progressed to the point where more definitive experiments on the stress reaction can be carried out. Primarily this was brought about by the characterization of several new materials which produce stress reaction in humans and the application of some new clinical methods of measuring the extent of the disturbance produced. During the next year proportionally more effort will be expended on the problem of the development of new

Downgraded to: ~~CONFIDENTIAL~~  
by authority of: 187475  
date: June 1977  
E2 IMPDET; CL BY 187475

E2 IMPDET; CL BY 187475

"knock-out" types of agents since progress has been slower than is desirable in this direction and because a new approach to the problem has been worked out. //

2. <sup>C</sup> [REDACTED] also serves as a general consultant to the Agency, provides services of a sensitive nature on an ad hoc basis, and serves as a cut-out in procurement problems.

3. The total cost of this project for a period of one year will not exceed \$71,500.00. <sup>40,500.00</sup> Charges should be made against Allotment 0525-1009-4902.

4. <sup>C</sup> [REDACTED] has been requested to submit a summary accounting or a copy of the Fund's annual audit report for the sponsor's inspection. Also, it has been requested that any unexpended funds shall be returned to the Agency.

5. Title to any permanent equipment purchased by funds granted <sup>C</sup> [REDACTED] shall be retained by <sup>B</sup> [REDACTED], in lieu of higher overhead rates.

6. It was mutually agreed that documentation and accounting for travel expenses which are normally reimbursable by <sup>B</sup> [REDACTED] shall conform with the accepted practices of the Fund.

Downgraded to: **CONFIDENTIAL**  
by authority of: 187475  
date: June 1977

~~CONFIDENTIAL~~

45-78

-3-

E2 IMPDET; CL BY 187475

7. <sup>C</sup> [redacted] agreed to comply with the requirements of the Memorandum of Agreement.

<sup>A</sup>  
[redacted]  
Chief  
TSS/Chemical Division

APPROVED FOR OBLIGATION  
OF FUNDS:

<sup>A</sup>  
[redacted]  
Research Director

Date: 12/30/59

Attachment:  
Proposal

Distribution:  
Original only

Downgraded to: **CONFIDENTIAL**  
by authority of: 187475  
date: June 1977  
E2 IMPDET; CL BY 187475

[redacted]

RESEARCH PROPOSAL

1960

The research to be undertaken during the twelve month period for which financial support is requested will be devoted to the continued analysis of the neural and endocrine mechanism of stress and the chemical agents that influence it. The screening procedures are based largely upon a further analysis of phases of stress and the influences of this physiologic behavior complex upon both body and skin temperatures as detailed in the accompanying report.

The chemical syntheses of new compounds will be continued B at the [redacted] under the supervision of [redacted] C and at the [redacted] under the supervision B of [redacted] C

These chemical agents will be screened for their capacity to provoke stress or to suppress the stress reaction in its acute or chronic phases. Animal testing will include pharmacologic screening and proper toxicity studies of these compounds as heretofore.

Chemical agents that have been found active and within a suitable toxicity range will be subjected to clinical screening on appropriate patients, the initial screening being carried out on advanced cancer patients. The amount of money devoted to chemical syntheses, however, has been further reduced. Chemical compounds available from biologic sources as well as those synthesized in the project will be screened, particularly those that are active in either raising or lowering body temperature.

As heretofore any agents which prove to be of interest in cancer will be subjected to further evaluation both on transplanted

WARNING NOTICE  
SENSITIVE INTELLIGENCE

Page 2

animal tumors and on cancer patients. This cancer phase of the project will be considered a by-product of the major objective, which will be directed to the problem of stress.

**WARNING NOTICE**

**SENSITIVE INTELLIGENCE -  
SOURCES AND METHODS INVOLVED**

RESEARCH PROPOSAL

1960

1- PHARMACOLOGY AND TOXICOLOGY

Pharmacologist and technician	\$12,000.00	
<del>██████████</del> toxicology	10,000.00	
Animal caretaker, animals and animal maintenance	<u>12,000.00</u>	\$34,000.00

2- CLINICAL SCREENING

Clinical assistants	\$12,000.00	
Clerical help and supplies	<u>5,000.00</u>	\$17,000.00

3- CHEMICAL SYNTHESIS

<del>██████████</del> Consultant	\$1,500.00	
<del>██████████</del>	5,000.00	
<del>██████████</del>	<u>10,000.00</u>	\$18,500.00
Chemical supplies	<u>4,000.00</u>	\$20,500.00
TOTAL		\$71,500.00

WARNING NOTICE  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED





SECRET

75-81

21 August 1959

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : MKULTRA, Subproject 45, Invoice No. 15  
Allotment 9-2502-75-902

1. Invoice No. 15 covering the above subproject is attached.  
Payment should be made as follows:

Cashier's check in the amount of \$3,760.00,  
drawn on a ██████████ bank.

The check should be made payable to the ██████████

2. Please forward the check to Chief, TSS/Chemical Division,  
through TSS Budget Officer, no later than 3 September 1959.

3. This is a final invoice. However, since it is anticipated  
that additional funds will be obligated for this project the files should  
not be closed.

██████████  
Chief  
TSS/Chemical Division

Attachment:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee

1 - TSS/FASB

2 - TSS/CD

TSS/CD/██████████

A

SECRET

45-81  
SECRET

INVOICE

For services

\$3,760.00  
[REDACTED]

-----  
CERTIFICATIONS

(1) It is hereby certified that this is invoice No. [REDACTED] applying to Subproject 45 of MKULTRA, that performance [REDACTED] satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

\_\_\_\_\_  
Chief, TSS/Chemical Division

Date: \_\_\_\_\_

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

\_\_\_\_\_  
Research Director

Date: \_\_\_\_\_

SECRET

mk ultra -45-82  
75  
3 July 1959

I hereby acknowledge receipt of cashier's check in the amount of \$3,760 representing a research grant from the

[REDACTED] B

[REDACTED] C

10 July 1959  
Date

RECEIPT

Acknowledged herewith receipt of the following check:

Treasurer's Check No. [REDACTED] C, dated 3 September 1959, in the amount of \$3,760.00, drawn on [REDACTED] B, payable to [REDACTED] B

[REDACTED]

[REDACTED] C

DATE 10 Sep 1959

45-83

MEMORANDUM RECEIPT

22 JUN 1955  
DATE

TO:

FROM:

SUBJECT:

*2262a sub 95  
JW of*

I hereby acknowledge receipt of the following:

~~\_\_\_\_\_~~ - E  
CHECK ~~\_\_\_\_\_~~ IN THE AMOUNT OF \$31,500.00  
RECEIVED 22 JUN 1955  
~~\_\_\_\_\_~~ - C

Please return \_\_\_\_\_ signed copy(ies) of this receipt

\_\_\_\_\_  
SIGNATURE OF RECEIPTER

To \_\_\_\_\_

FORM NO. 752  
1 AUG 55  
REPLACES FORM 31-66  
WHICH MAY BE USED.

\_\_\_\_\_  
DATE RECEIVED

(23)

SECRET

5 June 1959

MEMORANDUM FOR: THE COMPTROLLER

ATTENTION: Finance Division

SUBJECT: NEUTRA, Subproject 15, Additional  
Authorization No. 6

Under the authority granted in the Memorandum dated  
13 April 1958 from the DDI to the DD/A, and the extension of  
this authority in subsequent memoranda, Subproject 15 was  
previously approved. Under the same authority an additional  
sum of \$1,760.00 has been authorized to cover the subject's  
expenses and should be charged to Allotment 9-2002-75-202.

~~XXXXXXXXXXXX~~  
Chief  
TSS/Chemical Division

APPROVED FOR OBLIGATION OF FUNDS:

\_\_\_\_\_  
Research Director

Date: \_\_\_\_\_

Distribution:

Orig & 2 - Addresses

- 1 - TSS/OC
- 1 - TSS/TASR
- 2 - TSS/CD

SECRET

SECRET

TO: TSS/OD

This is an invoice against previously obligated funds.

1. Date of Obligation: January 59
2. Purpose of Project: Study of Stressor materials and the Stress Reaction.
3. Progress to Date: Satisfactory
4. Expiration Date: January 60
5. Project Monitor: Dr. [REDACTED] A

FROM: TSS/OD

Room B-10, West Outbuilding, Ext. 8504

SECRET

E2 IMPDET; CL BY 187475

5 June 1959

MEMORANDUM FOR THE RECORD

SUBJECT: Supplement to Project MKULTRA, Subproject 45

1. One of the activities that the [redacted] engages in on behalf of the Agency is the procurement of rare chemical substances required for the various chemical and physiological research programs being carried on in TSS/CD. Some of these materials are derived from direct synthetic programs under the direction of the Fund and others are purchased as such from domestic or foreign sources when the opportunity to do so appears.

2. The purpose of this supplement to Subproject 45 is to add the sum of \$3760.00 to allow the expansion of the above portion of the [redacted] activities during the remainder of this year. This additional work has been made necessary because of developments which have taken place in other parts of the research program being carried out by TSS/CD which have occurred since the original allotment for the [redacted] was made.

3. All provisions of the original memorandum establishing the present grant to the [redacted] will apply to this supplement. The original allotment for Subproject 45 approved on 4 February 1959 was \$71,500.00. The amount of \$3760.00 (charges should be made against Allotment 9-2502-75-902) should be added to this to bring the total for this year to a total of \$75,260.00.

[redacted]  
Chief  
TSS/Chemical Division

APPROVED FOR OBLIGATION OF FUNDS

[redacted]  
Research Director

Date

6/8/59

Attachment:

Orig. Memo. Only  
Budget

Downgraded to: ~~CONFIDENTIAL~~  
by authority of: 187475  
date: June 1977

E2 IMPDET; CL BY 187475

PROPOSED BUDGET

It is proposed to obtain certain substituted Indole compounds of types designated by the Sponsor from various synthetic programs being carried out in industrial facilities and to characterize these materials for the Sponsor's use in various physiological programs. It is estimated that the following budget will be required for six months:

Salaries.....	\$3,000.00
Travel.....	500.00
Supplies.....	260.00
Total	<u>\$3,760.00</u>



WARNING NOTICE  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

RECEIPT

Acknowledge herewith receipt of the following check:

Treasurer's check # [REDACTED] dated June 17, 1959, in the amount of \$35,750.00, drawn on [REDACTED] payable to [REDACTED]

Date 7<sup>3</sup> June 59

SECRET

11 June 1959

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : MKULTRA, Subproject 45, Invoice No. 14  
Allotment 9-2502-75-902

1. Invoice No. 14 covering the above subproject is attached.  
Payment should be made as follows:

Cashier's check in the amount of \$35,750.00,  
drawn on a ~~XXXXXXXXXX~~ E

The check should be made payable to the ~~XXXXXXXXXX~~  
~~XXXXXXXXXX~~ U

2. Please forward the check to Chief, TSS/Chemical Division,  
through TSS Budget Officer, no later than 22 June 1959. Other  
invoices will follow.

~~XXXXXXXXXX~~  
A Chief

- TSS/Chemical Division

Attachments:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee

1 - TSS/FASB

2 - TSS/CD

TSS/CD (11 June 59) A

SECRET

SECRET

15-88

INVOICE

For services

\$35,750.00

5 [REDACTED]

-----  
CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 14 applying to Subproject 45 of MKULTRA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

C/TSS/Chemical Division

Date:

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date:

SECRET

71/5

RECEIPT

Acknowledged herewith receipt of the following check:

Cashier's Check No. UF 4641, dated February 16, 1959,  
in the amount of \$3,750.00, drawn on  
[REDACTED] payable to  
[REDACTED]

B

[REDACTED]

Date: 2/24/59



SECRET

45-91

5 February 1959

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : ~~REDACTED~~, Subproject A5, Invoice No. 13  
Allotment 9-2502-75-502

1. Invoice No. 13 covering the above subproject is attached. Payment should be made as follows:

Cashier's check in the amount of \$35,750,  
drawn on a ~~REDACTED~~ E

The check should be made payable to the ~~REDACTED~~ B

2. Please forward the check to Chief, TSS/Chemical Division, through TSS Budget Officer, no later than 12 February 1959. Other invoices will follow.

A ~~REDACTED~~  
Chief  
TSS/Chemical Division

Attachments:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee  
1 - TSS/FASB  
2 - TSS/CD  
TSS/CD ~~REDACTED~~ (5Feb59)

I CERTIFY THAT FUNDS AVAILABLE FOR THIS OBLIGATION REFERENCE NO. 1215 9 FEB 1959  
CHARGE TO ALLOTMENT NO. 9-2502-75-512  
AUTHORIZING OFFICER

CHECK # 4544 IN THE AMOUNT OF \$ 35,750 RECEIVED.

SECRET



46-92

SECRET

TO: TSS/CD

1. Date of Obligation: January 59

2. Purpose of Project: Study of  
Stress material and the stress  
resilin

3. Progress to Date: Substantially  
Actual

4. Expiration Date: January 60

5. Project Monitor: [Redacted]

FROM: TSS/CD

Room B-10, West Outbuilding, Ext. 8612

SECRET

SECRET

48-93  
27 January 1959

MEMORANDUM FOR: CONTROLLER  
ATTENTION : Finance Division  
SUBJECT : MEXURSA, Subproject 45, Additional  
Authorization No. 7

Under the authority granted in the memorandum dated 13 April 1953, from the DCI to the ID/A and the extension of this authority in subsequent memoranda, Subproject 45 was previously approved. Under the same authority an additional sum of \$71,500.00 has been authorized to cover the subproject's expenses, to be charged to Allotment 9-2502-73-902.

~~XXXXXXXXXXXX~~  
Chief

TSS/Chemical Division

APPROVED FOR OBLIGATION OF FUNDS:

\_\_\_\_\_  
Research Director

Date: \_\_\_\_\_

Distribution:

Orig & 2 - Addressee

- 1 - TSS/CC
- 1 - TSS/FASB
- 2 - TSS/CD

TSS/CD: [redacted] (27Jan59)

*A*

SECRET

SECRET

TO: TSS/CO

This is an invoice against previously obligated funds.

1. Date of Obligation: 27 Jan 1959
2. Purpose of Project: Analysis of hypothalamic & endocrine mechanism of stress & chemical agents that modify it.

3. Progress to Date: Satisfactory

4. Expiration Date: 27 Jan 1960

5. Project Monitor: ~~XXXXXXXXXX~~ A

FROM: TSS/CO

Room 8-0, West Outbuilding, AFB, ~~XXXXXXXXXX~~ G

SECRET

Downgraded to: ~~CONFIDENTIAL~~  
by authority of: 187475  
date: June 1977

E2 IMPDET; CL BY 187475

45-95  
26 January 1959

MEMORANDUM FOR: THE RECORD

SUBJECT : Continuation of MKULERA, Subproject No. 45

1. The scope of this subproject includes all those activities now engaged in by the [REDACTED] under the direction of TBS/CD with the exception of those outout functions specifically mentioned in connection with other MKULERA subprojects. In general, the research effort under this subproject will continue along the lines laid down in previous years. These involve the synthesis and pharmacological and clinical evaluation of compounds of those chemical families known to have application in the psychochemical and "K" fields. During the past year important progress has been made in the area related to stressor compounds and the relationship of these materials to the physiological pathways through which both stress and the reaction to it are mediated in human beings. In our Agency frame of reference, the fast adaptive reaction (nervous control) is of more vital importance than the slower humoral reaction (pituitary-adrenal axis). Since both of these pathways occur in the same individual, one of the major problems in doing research in this area has been the lack of knowledge of techniques allowing one to distinguish between the various types of observed phenomena. Progress made in this subproject on particular stressor agents and their relationships to known humoral agents for the first time permits the experimenter to make this distinction on a rational basis. As indicated in the attached proposal, this advantage will be pursued during the coming year with the following goals in mind:

- (1) Development of materials & techniques for the production of maximum levels of physical and emotional stress in human beings.
- (2) Development of materials and techniques which produce a maximum attenuation of stress in human beings once it has been produced.
- (3) Development of new and more reproducible indicators of stress than those now in use in the Agency. The emphasis in this will be on those indicators which can be measured indirectly.
- (4) Elucidation of the significant properties of the negative phase of stress in order that psychological techniques may be worked out in other projects to exploit this phase of the human reaction to potent emotional stress.

Downgraded to: ~~CONFIDENTIAL~~  
by authority of: 187475  
date: June 1977

E2 IMPDET; CL BY 187475

45-95

Downgraded to: **CONFIDENTIAL**  
by authority of: 187475  
date: June 1977

E2 IMPDET; CL BY 187475

2. [redacted] also serves as a general consultant to the Agency, provides services of a sensitive nature on an ad hoc basis, and serves as a cut-out in procurement problems.

3. The total cost of this project for a period of one year will not exceed \$71,500. Charges should be made against Allotment 9-2502-75-902.

4. [redacted] has been requested to submit a summary accounting or a copy of the Fund's annual audit report for the sponsor's inspection. Also, it has been requested that any unexpended funds shall be returned to the Agency.

5. Title to any permanent equipment purchased by funds granted [redacted] shall be retained by the [redacted] in lieu of higher overhead rates.

6. It was mutually agreed that documentation and accounting for travel expenses which are normally reimbursable by the [redacted] shall conform with the accepted practices of the Fund.

7. [redacted] agreed to comply with the requirements of the Memorandum of Agreement.

[redacted] A  
Chief  
TSS/Chemical Division

APPROVED FOR OBLIGATION OF FUNDS

[redacted] A  
Research Director

Date: Feb. 4 - 1977

Attachment:  
Proposal  
Original only

Downgraded to: **CONFIDENTIAL**  
by authority of: 187475  
date: June 1977

E2 IMPDET; CL BY 187475

The research to be undertaken during the next 12 months for which financial support is hereby requested will be devoted to the analysis of the hypothalamic and endocrine mechanism of stress and chemical agents that modify it. The investigations proposed are a direct continuation and outgrowth of those supported in the previous year.

The screening procedures to be used have been markedly widened in scope to embrace a consideration of both the metabolic and enzymatic effects of stress or of the chemical agents studied.

A novel screening procedure which depends upon the survival time of animals maintained without food or water has been devised and has already been put to practical use in demonstrating the role of the hypothalamus in survival. In addition to this over-all survival screening technic, screening technics have been devised for investigating separately the role of water and fat metabolism in stress.

It is proposed to continue work on the negative phase of stress which we have previously delineated by study of the egg white response in rats. (See research report for 1957 - 1958)

As an outgrowth of experiments performed in 1958 it is now possible to evaluate therapeutic agents at the enzymatic level. See research report enclosed. This technic of using a battery of enzyme systems *in vitro* as a method of evaluating the biological effectiveness of newly synthesized organic compounds opens up a whole new line of investigation and is the most rapid method of evaluation that has been devised to date and probably the most basic. It is proposed that we exploit this new approach to our utmost in the next twelve months.

The chemical synthesis of possibly active compounds will be continued at the [REDACTED] and the [REDACTED] and these chemical agents will be screened for their capacity to provoke stress or to suppress the stress reaction in its acute or chronic phases. The tests employed on animals will be used for screening and proper toxicity studies of the compounds will be carried out as heretofore.

WARNING NOTICE  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

85-95

**RESEARCH PROPOSAL**  
**1959 - 1960**

PHARMACOLOGY AND TOXICOLOGY

Pharmacologist and technician	\$12,000.00	
<del>                    </del> toxicology	10,000.00	
Animal caretaker, animals and animal maintenance	<u>12,000.00</u>	\$34,000.00

CLINICAL SCREENING

Clinical assistants	10,000.00	
Clarial help and supplies	<u>5,000.00</u>	15,000.00

CHEMICAL SYNTHESIS

<del>                    </del> , consultant	1,500.00	
<del>                    </del>	5,000.00	
<del>                    </del>	12,000.00	
Chemical supplies	<u>4,000.00</u>	<u>22,500.00</u>

TOTAL \$ 71,500.00

WARNING NOTICE  
FIVE INTELLIGENCE  
AND METHODS INVOLVED

RECEIPT

Acknowledged herewith receipt of the following check:

Cashier's Check No. [REDACTED], dated September 30, 1958, <sup>C</sup>  
in the amount of \$21,733.34, drawn on [REDACTED] B  
payable to [REDACTED]

Date:

6 Oct 58

45-97

450

S-3503-N-101

46

28 JAN 1958	Authorizations # 6	65,700.00		65,710.00
30 JAN 1958	Invoice # 10		31,733.33	19,466.67
24 APR 1958	Invoice # 11		31,733.33	31,733.33
24 SEP 1958	Invoice # 12		31,733.33	-

24 SEP 1958

Lig  
8

SECRET

45-98

22 September 1956

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TBS/Budget Officer

SUBJECT : MULLER, Subproject 45, Invoice No. 12,  
Allotment C-2502-10-001

1. Invoice No. 12 covering the above subproject is attached.  
Payment should be made as follows:

Cashier's check in the amount of \$21,733.34,  
drawn on a ~~check~~ <sup>E</sup>

The check should be made payable to the ~~treasury~~ <sup>B</sup>

2. Please forward the check to Chief, TBS/Chemical Division,  
through TBS/Budget Officer, no later than Monday, 6 October 1956.

3. This invoice represents the total amount currently author-  
ized under Subproject 45. However, since it is anticipated that ad-  
ditional funds will be obligated for this project, the files should  
not be closed.

~~\_\_\_\_\_~~ A  
Chief  
TBS/Chemical Division

Attachments: CHECK <sup>H</sup> ~~\_\_\_\_\_~~ THE AMOUNT OF \$ <sup>21,733.34</sup>  
Invoices and Certifications RECEIVED <sup>21957</sup>

Distribution: ~~\_\_\_\_\_~~ A  
Orig & 2 - Addressee

~~\_\_\_\_\_~~ H  
~~\_\_\_\_\_~~ 17.2 21,733.34

21,733.34

SECRET ~~\_\_\_\_\_~~ H

INVOICE

For services

\$21,733.34

~~CONFIDENTIAL~~ B

CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 12 applying to Subproject 45 of NEULTRA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipt is on file in TSS/MS; that this bill is just and correct and that payment thereof has not yet been made.

\_\_\_\_\_  
Chief, TSS/Chemical Division

Date:

(2) It is hereby certified that this invoice applies to Subproject 45 of NEULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

\_\_\_\_\_  
Research Director

Date:

10

(DO)

RECEIPT

Acknowledged herewith receipt of the following check:

Check No. 71601, dated April 30, 1958, in the amount of \$1,733.33, drawn on [REDACTED] payable to the [REDACTED]

- E -  
- B -  
- C -



Date: 6 May 58

SEC

45-100

22 April 1958

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : MSHLTRA, Subproject 45, Invoice No. 11,  
Allotment 8-2502-10-001

1. Invoice No. 11 covering the above subproject is attached.  
Payment should be made as follows:

Cashier's check in the amount of \$21,733.33,  
drawn on a ~~bank~~ bank.

The check should be made payable to the ~~United States Government~~ <sup>F</sup> ~~United States Government~~ <sup>B</sup>

2. Please forward the check to Chief, TSS/Chemical Division,  
through TSS/Budget Officer, no later than Wednesday, 7 May 1958.

3. This invoice represents the total amount currently  
authorized under Subproject 45. However, since it is anticipated  
that additional funds will be obligated for this project, the  
files should not be closed.

~~Chief~~  
TSS/Chemical Division

Attachments:  
Invoice and Certifications

DISTRIBUTION:  
Orig & 2 - Addressee  
✓ - TSS/FASB  
2 - TSS/CD

I CERTIFY THAT THE  
OBLIGATION REFERENCE NO. 145D  
CHARGE TO ALLOTMENT NO. F-2502-10-001  
AUTHORIZING OFFICER

~~██████████~~  
CHECK # 2461 IN THE AMOUNT OF \$ 21,733.33  
RECEIVED. 5 1958

SECRET

48-100

INVOICE

For services

\$21,735.33

[REDACTED]

CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 11 applying to Subproject 45 of MQULEPA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

\_\_\_\_\_  
Chief, TSS/Chemical Division

Date:

(2) It is hereby certified that this invoice applies to Subproject 45 of MQULEPA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

\_\_\_\_\_  
Research Director

Date:

SECRET

45-101

SECRET

21 January 1978

MEMORANDUM FOR: COMPTROLLER

ATTENTION : Finance Division

SUBJECT : ~~SECRET~~, Subproject 45, Additional Authorization No. 6

Under the authority granted in the memorandum dated 13 April 1973, from the DCI to the DA/A and the extension of this authority in subsequent memoranda, Subproject 45 was previously approved. Under the same authority an additional sum of \$65,200.00 has been authorized to cover the subproject's expenses (thereby bringing to a total of \$65,200.00 funds obligated during FY 78), to be charged to Allotment 8-2502-10-001.

~~SECRET~~ - A  
Chief  
TSS/Chemical Division

APPROVED FOR OBLIGATION OF FUNDS

~~SECRET~~ - A  
Research Director

I CERTIFY THAT FUNDS ARE AVAILABLE FOR OBLIGATION FROM THE CHARGE TO THIS ACCOUNT  
1/30  
8-2502-10-001

Date: \_\_\_\_\_

Distribution:  
Orig & 2 - Addressees

- 1 - TSS/OC
- 1 - TSS/FASB
- 1 - TSS/CD

TSS/CD: ~~SECRET~~ (21 January 1978)

1/5-102

RECEIPT

Acknowledged herewith receipt of the following check:

Check No. [REDACTED], dated February 7, 1958, in the amount of \$21,733.33 drawn on the [REDACTED] payable to the [REDACTED] -E  
-B

[REDACTED] -C

Date: 20 Feb 58



45-103  
SECRET

INVOICE

For services

\$21,733-33

WARRANTY/CERTIFICATE

(1) It is hereby certified that this is Invoice No. 10 applying to Subproject No. 45 of MUNITRA, that performance has been satisfactory, that the services have been accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

Chief, TSS/Chemical Division

Date:

(2) It is hereby certified that this invoice applies to Subproject No. 45 of MUNITRA which was duly approved, and that the project has been carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date:

Downgraded to: CONFIDENTIAL  
by: [redacted] on: 12/18/77  
Date: June 1971  
E2 IMPDET; CL BY 187475

45-104

DRAFT/ [redacted] A

21 January 1958

MEMORANDUM FOR: THE RECORD

SUBJECT : Continuation of MKULTRA, Subproject No. 45

B

1. The scope of this subproject includes all those activities now engaged in by [redacted] under the direction of TSS/CD with the exception of those cutout functions specifically mentioned in connection with other MKULTRA subprojects. In general, the research effort under this subproject will continue along the lines laid down in previous years. These involve the synthesis and pharmacological and clinical evaluation of compounds of those chemical families known to have application in the psychochemical and "X" fields. Clinical work in the "natural toxic psychoses" carried out last year indicates that, in general, the useful (reversible) phases of such psychoses are related to the presence of various chemical stressor materials in the circulation. These materials arise from faulty metabolic processes occasioned by the particular disease in question. Materials synthesized in the project are capable of reproducing the various clinical syndromes that are observed in the natural disease.

Shw  
S.C.

2. Knowledge of the nature of the important stressor compounds indicated above has allowed the design of an animal test which indicates relative potency, mode of action, etc., of these materials without the necessity of expensive and hazardous clinical testing in this area. During the coming year as indicated in the attached proposal from [redacted], a limited program of synthetic work and the attendant testing and screening will be carried out; but the major effort will be related to studies directly concerned with the production and control of the stress reaction in human beings. In line with the requested reduction of effort in biochemical research in TSS/CD, the funding of this project during the coming year has been reduced some 34% over last year.

OK C

3. [redacted] also serves as a general consultant to the Agency, provides services of a sensitive nature on an ad hoc basis, and serves as a cut-out in procurement problems.

\$71,500

4. The total cost of this project for a period of one year will not exceed \$67,200-00. Charges should be made against Allotment C-2502-10-001.

9-2602-75-972

Downgraded to: CONFIDENTIAL  
by: [redacted] on: 12/18/77  
Date: June 1971  
E2 IMPDET; CL BY 187475

[redacted]

- 5. [redacted] has been requested to submit a summary accounting or a copy of the Fund's annual audit report for the sponsor's inspection. Also, it has been requested that any unexpended funds shall be returned to the Agency. C
- 6. Title to any permanent equipment purchased by funds granted [redacted] shall be retained by [redacted] in lieu of higher overhead rates. B
- 7. It was mutually agreed that documentation and accounting for travel expenses which are normally reimbursable by [redacted] shall conform with the accepted practices of the Fund. B
- 8. [redacted] agreed to comply with the requirements of the Memorandum of Agreement. C

[redacted]

A

Chief  
TSS/Chemical Division

APPROVED FOR OBLIGATION OF FUNDS:

[redacted]

A

Research Director

Date: June 27-1978

Attachment:  
Proposal

Original only

45-104  
ANNOUNCING NOTICE  
SPECIAL INTERFERENCE  
AND METHODS INVOLVED

RESEARCH PROPOSAL  
1958 - 1959

The research to be undertaken during the 12 months period for which financial support is requested will be devoted to an analysis of the neural and endocrine mechanism of stress and the chemical agents that influence it. The screening procedures are based largely upon the analysis of the General Adaptation Syndrome that has been worked out in rats during the past year, an outline of which is appended.

3 The chemical synthesis of possibly active compounds will  
3 be continued at the [REDACTED] and the [REDACTED]  
[REDACTED] and these chemical agents will be screened for their capacity to provoke stress or to suppress the stress reaction in its acute or chronic phases. The tests employed on animals will be used for screening and proper toxicity studies of the compounds will be carried out as heretofore.

Chemical agents that have been found active and within a suitable toxicity range will be subjected to clinical screening on appropriate patients, the initial screening being carried out as heretofore on advanced cancer patients. The amount of money devoted to chemical synthesis will be much reduced and chemical compounds available from various sources as well as those synthesized in the project will be screened.

As heretofore any agents which prove of interest in cancer will be subjected to further evaluation both on transplanted animal tumors and on cancer patients. This cancer phase of the project

will be considered a by-product of the major objective, which  
will be directed to the problem of stress.

**WARNING NOTICE**  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

PROPOSED BUDGET  
1958 - 1959

1 - PHARMACOLOGY AND TOXICOLOGY

Pharmacologist and technician	\$ 12,000.00	
[REDACTED], toxicology	8,000.00	
[REDACTED] - Special screening procedures	1,200.00	
Animal caretaker, animals and animal maintenance	<u>12,000.00</u>	\$ 33,200.00

2 - CLINICAL SCREENING

Clinical assistants	9,500.00	
Clerical help and supplies	<u>5,000.00</u>	14,500.00

3 - CHEMICAL SYNTHESIS

[REDACTED] consultant	1,500.00	
[REDACTED]	5,000.00	
[REDACTED]	7,000.00	
Chemical Supplies	<u>4,000.00</u>	<u>17,500.00</u>

TOTAL		\$ 65,200.00
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17 October 1957

TSS

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer  
SUBJECT : MKULTRA Subproject 45, Invoice No. 9  
Allotment 7-2502-10-001

1. Invoice No. 9 for the above subproject is attached.  
Payment should be made as follows:

E Cashier's check in the amount of \$33,333.33, drawn  
on a ██████████ bank.

B The check should be made payable to ██████████ B

2. Please forward the check to Acting Chief, TSS/  
Chemical Division through TSS/Budget Officer by Thursday,  
31 October 1957. Other invoices will follow.

██████████  
Acting Chief  
TSS/Chemical Division

A  
MAR 15 1958

Attachments:  
Invoice & Certifications

CHECK 620461 RECEIVED DEPARTMENT OF ██████████ 33,333.33

Distribution:  
Orig & 2 - Addressee ██████████  
1 - Comptroller ██████████

A

29 Oct 57

Attn: 600-1-227-2502-10-001-142-2 33,333.33  
Cc (ENVOYAGE (International)) @ 33,333.33

1957 OCT 25 AM 10:15

CERTIFIED FOR PAYMENT OR CREDIT  
AUTHORITY: ██████████ OFFICER

~~SECRET~~  
INVOICE

For services

\$33,333.33

\_\_\_\_\_

-----

CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 9 applying to Subproject No. 45 of MKULTRA, that performance has been satisfactory, that the services have been accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

\_\_\_\_\_  
Acting Chief, TSS/Chemical Division

Date:

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project has been carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

\_\_\_\_\_  
Research Director

Date:

*WA*

RECEIPT

Acknowledged herewith receipt of the following check:

Official check No. 209-288152, dated May 14, 1957, in the amount of \$33,333.33, drawn on the [REDACTED] payable to [REDACTED]

Date: 70 May '57

801-4

SECRET  
3 May 1957

45-109  
TSS

**MEMORANDUM FOR: CHIEF, FINANCE DIVISION**

**VIA: TSS/Budget Officer**

**SUBJECT: MKULTRA Subproject 45, Invoice No. 8  
Allotment 7-2502-18-001**

1. Invoice No. 8 for the above subproject is attached. Payment should be made as follows:

E Cashier's check in the amount of \$33,333.33, drawn on a ██████████ bank.

B The check should be made payable to ██████████ B

2. Please forward the check to Chief, TSS/Chemical Division through TSS/Budget Officer by Friday, 17 May 1957. Other invoices will follow.

**SIDNEY GOTTLIEB**  
Chief, TSS/Chemical Division

Attachments:  
Invoice & Certifications

██████████ E

Distribution:  
Orig & 2 - Addressee  
1 - Comptroller

CHECK # ██████████ IN THE AMOUNT OF \$33,333  
RECEIVED 17 MAY 1957

██████████ A

Dr. 600-1-887-2502-10-001-17-9- & 33,333.33  
Cr. 9-1- & 33,333.33

1821 CERTIFIED FOR PAYMENT OR CREDIT  
10/5/57  
AUTHORIZED SIGNATURE OFFICER

RECEIVED

52630



RECEIPT

45-110

Receipt is hereby acknowledged of the following check:

Cashier's check No. 400840, dated February 12, 1957,  
drawn on [REDACTED] E  
in the amount of \$33,333.34, payable to [REDACTED] B

B

Date: 2-26-57

RECEIPT

Receipt is hereby acknowledged of the following check:

Cashier's check No. 400840, dated February 12, 1957,  
drawn on [REDACTED] E  
in the amount of \$33,333.34, payable to [REDACTED] B

B

Date: 2-26-57

RECEIPT

Receipt is hereby acknowledged of the following check:

Cashier's check No. 400840, dated February 12, 1957,  
drawn on ~~\_\_\_\_\_~~  
in the amount of \$33,333.34, payable to ~~\_\_\_\_\_~~

E  
8

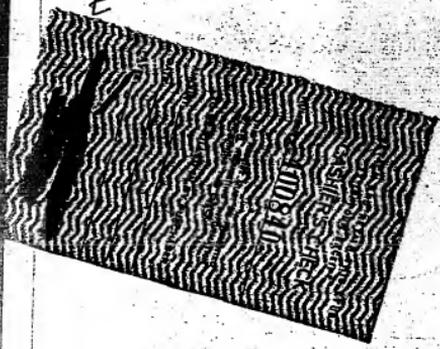
Date: \_\_\_\_\_

*Given to* ~~\_\_\_\_\_~~ A

~~\_\_\_\_\_~~ 25 February 1957

A

E



98-111

SECRET

25 JANUARY 1957

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA: TSS/Budget Officer

SUBJECT: MKULTRA Subproject 45, Invoice No. 7  
Allotment 7-TS02-10-001

1. Invoice No. 7 for the above subproject is attached. Payment should be made as follows:

E Cashier's check in the amount of \$33,333.34, drawn on a ██████████ bank.

⊖ The check should be made payable to the ██████████

2. Please forward the check to Chief, TSS/Chemical Division through TSS/Budget Officer by Friday, 8 February 1957. Other invoices will follow.

SIDNEY GOTTLIEB  
Chief  
TSS/Chemical Division

Attachment: Invoice & Certifications CHECK # 200590 THE AMOUNT OF \$33,333.34 RECEIVED

Distribution: Orig & 2 - Addressee ██████████ A  
1 - Comptroller ██████████

Dr. 600.1-887-2502-10-001-17.1 \$ 33333.34  
Cl. Cash B 33333.34

CERTIFIED FOR PAYMENT OR CREDIT  
1/29/57  
AUTHORITY: ██████████ OFFICER

5-1200

SEARCHED

INVOICE

For services

\$33,333.34

CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 7 applying to Subproject 45 of MKULTRA, that performance has been satisfactory, that the services have been accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

Chief, TSS/Chemical Division

Date:

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project has been carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date:

15-112  
17 January 1957

**MEMORANDUM FOR: COMPTROLLER**

**ATTENTION: Finance Division**

**SUBJECT: MKULTRA, Subproject #3, Additional  
Authorization No. 3**

Under the authority granted in the memorandum dated  
13 April 1953, from the DCI to the DD/A and the extension of this  
authority in subsequent memoranda, Subproject 45 was previously  
approved. Under the same authority an additional sum of \$100,000.00  
has been authorized to cover the subproject's expenses (thereby  
bringing to a total of \$100,000.00 funds obligated during FY 57),  
to be charged to Allotment 7-2502-10-001.

**SIDNEY GOTTLIEB**  
Chief  
TSS/Chemical Division

**APPROVED FOR OBLIGATION  
OF FUNDS:**

\_\_\_\_\_  
Research Director

Date:

Distribution:

Orig & 2 - Addressee

1 - TSS/OC            1 - TSS/SRB  
1 - TSS/FASB        2 - TSS/CD

TSS/CD: \_\_\_\_\_ (17 January 1957)

A

~~RECORDED~~

MOR 1515

MEMORANDUM FOR: THE RECORD

SUBJECT: Project MKULTRA, Subproject 45

1. The scope of this subproject includes all those activities now engaged in by the [redacted] under the direction of TSS/CD with the exception of those cutout functions specifically mentioned in connection with other MKULTRA subprojects. In general, the research effort under this subproject will continue along the lines laid down in previous years. These involve the synthesis and pharmacological and clinical evaluation of compounds of those chemical families known to have application in the psychochemical and "K" fields. Also, last year, research in the field of so-called "natural toxic psychoses" was undertaken and will be continued during the coming year.

step //

2. The attached proposal from [redacted] because of its unclassified status, is couched in therapeutic terms; therefore, a certain amount of translation of its substance is warranted. Very briefly, the study on "toxic psychoses" has permitted the possible sources of reversible psychotic and/or comatose conditions to be narrowed down to a workable maximum number about which critical experiments can be designed to test various hypothetical chemical mediators. The chemical synthetic and screening program (some 100 new compounds during the year) has turned up three compounds of different families which are of fundamental importance with relation to the goals of this project. These three compounds include an orally active material which reduces blood glucose; another which acts by all routes, including percutaneous, and which appears to be the chemical mediator of "stress", and finally, a compound which is also orally active and which is a very potent new type of barbiturate and possibly alcohol antidote. It is now proposed to reduce the volume of the synthetic chemical effort in order to work out the pharmacological and clinical aspects of these and closely related substances.

3. [redacted] also serves as a general consultant to the Agency, provides services of a sensitive nature on an ad hoc basis, and serves as a cut-out in procurement problems.

4. The total cost of this project for a period of one year will not exceed \$100,000.00. Charges should be made against Allotment 7-2502-10-001.65, 100.00

[redacted]  
CONFIDENTIAL  
[redacted]  
[redacted]

CONFIDENTIAL  
by authority of [redacted]  
date: June 1957

E2 IMEDS

5. [redacted] has been requested to submit a summary C  
accounting or a copy of the [redacted] annual audit report be made avail- B  
able for the sponsor's inspection. Also, it has been requested that  
any unexpended funds shall be returned to the Agency.

6. Title to any permanent equipment purchased by funds  
granted [redacted] shall be retained by the [redacted] B  
[redacted] in lieu of higher overhead rates.

7. It was mutually agreed that documentation and accounting for  
travel expenses which are normally reimbursable by [redacted] B  
[redacted] shall conform with the accepted practices of the Fund.

8. [redacted] agreed to comply with the requirements of C  
the Memorandum of Agreement.

[redacted] A

Chief, Branch II  
TSS/Chemical Division

APPROVED FOR OBLIGATION  
OF FUNDS:

[redacted] A  
Research Director

APPROVED:  
  
Chief, TSS/Chemical Division

Date: 23 Jan 1957.

Attachment:  
Proposal

Original only

CONFIDENTIAL  
by authority of: 127475  
date: June 1957  
E2 IMEDS

PROPOSED RESEARCH PROGRAM

Four lines of investigation are proposed for the year 1957-58. The first line of investigation is the continuation of the toxic psychic states as illustrated by uremia, which was begun under the last grant. In the present proposal it is planned to study various phases of the uremic state along two major lines. One of these is the biochemical and pathological investigation of patients admitted to [REDACTED] B

[REDACTED] The other line of investigation will be pursued on experimental animals. Kidneys have either been removed or have been rendered nonfunctional by the ligation of the ureters. The major aspects of these two investigations are discussed in the appended report.

The second investigation proposed has to do with the investigation of novel glucose metabolic blocking agents. We are currently investigating a series of diglycolate derivatives which we have shown to block glucose metabolism with resulting storage of glycogen in the various organs, liver and kidney. The details of this are also appended.

The third proposal has to do with the study of some cyclic diamino compounds which we have shown produce the stress of phenomemon and associated rheumatoid states. The details of this proposal are also appended.

The fourth proposal concerns the continuation of chemical synthesis of a variety of piperazine compounds which will be linked with sarcosine. This report is also appended.

A similar line of chemical synthesis is also being carried out on nitrogen-containing bis phenols. These two parallel lines of chemical synthesis are a continuation of the investigations of [REDACTED] C

W [REDACTED] CE

I - WORK ON TOXIC PSYCHOSES

Investigations that have been just completed on 138 autopsies of patients that died in uremia have shown that there are three aspects of uremic poisoning as demonstrated by correlation of the pathologic changes in the heart with the blood chemistry prior to death. In one group of cases the toxic effects are caused by acidosis and these effects are not dependent upon the level of the nonprotein nitrogen or potassium levels in the blood. In a second group of patients with elevated serum potassium definite focal damage with death of myocardial tissue is found in the heart and these patients died of potassium poisoning. In the third group of patients, who presumably died of the accumulation of toxic nitrogenous substances in the blood or related compounds, the cardiac damage is associated with unusually high nonprotein nitrogen levels in the blood and the heart shows a definite inflammatory reaction with the appearance of Anitschkow's cells. We have reason to believe from the histologic study of the pathologic changes that these toxic nitrogenous compounds are diamino derivatives of aromatic nuclei.

The work on uremic toxic states is being pursued by the analysis of the cerebral spinal fluid of patients with uremia, and by the production of uremia in experimental animals by three methods: (a) Nephrectomy; (b) ligation of the ureters; (c) poisoning of the kidneys with derivatives of naphthalic anhydride.

Since it has now been demonstrated that there are at least three components to the uremic state (1) acidosis which changes the blood pH, (2) elevated potassium levels, and (3) elevated nonprotein nitrogen levels, it is possible to go back in the histories of these patients and correlate the depth of uremic coma and its duration with the dominant component in the blood changes in each individual case whether it be potassium, pH or nitrogenous.

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~

45-11  
1-2

On the living patients it is possible by placing them on the artificial kidney and by adjusting the fluid bath which controls the dialysis, to differentially modify each of these three components in individual cases and to determine its effect on comatose states in patients. It is also possible to check this with spinal fluid determinations.

In the experiments that have been set up on animals we have living for periods of two to four days uremic rats and rabbits whose kidneys have been removed or whose kidneys are non-excreting because of ligation of the ureters. In the initial experiment on these animals we have been interested in simple fluid redistribution in the uremic state. It has been known for some time that patients dying of uremia may show increased fluid accumulation in any or all of the serous cavities. In other words, they show an accumulated transudate in the peritoneal cavity, in the pericardial cavity, in the pleural cavity or in the meningeal cavity of the subarachnoid space. In the control animals and in many patients, death from uremia occurs before this change in fluid distribution has occurred. In our experiments, by giving cortisone we can markedly increase the transudating fluid in all of these cavities and therefore produce at will cerebral edema along with increased fluid in the other serous cavities while the animal is still alive. This change in the distribution of fluid is important since in all the textbooks on uremia prior to recent potassium studies, the uremic state as exemplified by psychoses and coma, was thought to be due to cerebral edema or simple wet brain. One of the most striking bits of ignorance that were confronted in these studies is the fact that although it has been known for hundreds of years that there is such redistribution of fluid in the serous cavities, no one has ever raised the question whether it is due to increased rate of effusion or delayed rate of absorption, or both.

It is becoming increasingly evident in the study of abnormal fluid distribution in the body that there are two major controlling factors. One of these is the chemical

**WARNING NOTICE**

constitution of the fluid to be exchanged which may alter diffusion constants by its ionic or osmotic components, or alter the diffusion rate by containing constituents which damage or otherwise alter the diffusion membrane. The second factor is the biological composition of the diffusion membrane with its living structure and collagenous matrix. In the past several hundred years the tanning industry has been working with the biochemical properties of collagen since leather is 90 to 95% collagen. The workers in this industry have accumulated a large amount of information on two different agents. Those that wet or render more pliable collagen matrix and therefore make it more porous, and those that harden or toughen the collagen matrix and therefore render it less permeable. The first class of agents is termed lyotropic and its classical member is dilute acetic acid. The other group of agents is called tannin and the classical agent is tannic acid or the pyrogallic acids. This group of agents can be applied to the diffusion membranes to alter their reaction. Since many of the induced cerebral states can be attributed directly to hydration or dehydration of the cerebral substance, this investigation of the diffusion rates into and out of the serous cavities of the meninges offers a fundamental approach to study of one aspect of cerebral function.

## II - INVESTIGATION OF GLUCOSE METABOLISM AND ITS RELATION TO MENTAL FUNCTION AND CANCER THERAPY

It is well known that the brain in its metabolic function relies heavily on glucose and oxygen. The importance of the relation of glucose to cerebral function was first emphasized by the introduction of insulin shock therapy into the treatment of schizophrenia. This form of shock therapy was subsequently replaced by electric shock, but recently <sup>C</sup> [redacted] of [redacted] <sup>B</sup> [redacted] has shown that in diabetes the psychotic state can be induced by low blood sugar in the brain from sensitivity to insulin and can be reversed to normal by the intravenous administration of glucose. The author has been interested in substituting orally active and nontoxic chemical compounds as a substitute for insulin with the hope that more simple methods can be devised for modifying cerebral metabolism. A series of alkyl and alkylamino esters of oxy-diacetic acid have been prepared which block some phase of the Krebs's cycle of glucose metabolism. The exact point of blockage remains to be determined. The phenomena of blockage by these compounds, however, have been demonstrated in animals by showing that they produce glycogen storage in the liver, heart, and kidneys by preventing the conversion of glycogen to glucose. For the first time it has been possible to produce experimentally von Gierke's disease, which is characterized by glycogen storage in the above-mentioned organs.

The phenomenon of glycogen storage was first produced by both the dimethyl and diethyl derivatives of the diglycolate compounds. The initial experiments consisted of giving groups of six rats each doses of 5, 10, and 25 mg. per rat daily for periods of 6 weeks to 2 months. The glycogen storage was most marked early in the course of the administration, as demonstrated by sacrificing some rats at the end of 2 to 4 days. The experiments were subsequently modified to include rabbits, so that the blood and urine studies could be more easily made. It was shown in rabbits that the compounds initially

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 NATIONAL ARCHIVES  
 COLLEGE PARK, MARYLAND  
 1968

produced glycosuria, which disappeared in 48 hours. The fasting blood sugar of the animals is lowered; no acetone bodies appear in the urine.

-In the next experiment the compounds were administered orally, intramuscularly or intravenously to cancer patients and were found effective in controlling for a period of 3 months (to-date) diseases in the lymphoma and leukemic class. These patients have been able to tolerate the compound, and although it initially produced lowering of the blood sugar, if the dose is not increased, there is acquired tolerance to the hypoglycemic effect of the drug.

In the next experiment, the drug was administered to four diabetic patients. The blood sugar can be reduced in fresh diabetics not previously subjected to insulin from a level of 350 mg% to 250 mg% by the administration of 250 mg. of the compound. Diethyl is more potent than dimethyl derivatives. In other diabetics the blood sugar levels can be satisfactorily controlled for a period of 3 to 4 weeks on small doses but after that time tolerance develops, and the dosage must be raised. The compound lowers blood sugar by glycogen storage, but does not increase the capacity to burn sugar. Insulin must therefore be added.

In another group of experiments about to be undertaken, it is planned to administer these drugs to hospitalized diabetics and study the effect on mental function of large doses of the compound.

Several of the cancer patients on the compound have complained of mental fogging, which is accompanied by complete relief from pain on high dosage. This mental fogging, of course, is not experienced by diabetics and must be a function of the glucose level in the brain.

It is planned to synthesize a group of allied compounds and to broaden this line of investigation. It is also planned to utilize a Warburg apparatus and electrophoresis in order to elucidate the exact phase of glucose metabolism that is inhibited by these compounds.

III

[REDACTED] \* C

By

[REDACTED] C

and

[REDACTED] C

Prolongation of the Inflammatory Process by Immune Responses. When bacteria or similar injurious substances gain access to living tissues the local capillary bed responds and permits the escape of fluid and leucocytes into the zone of injury. Most of the extravasated fluid returns to the circulation by the lymphatics because the inflammatory edema compresses capillaries and venules but distends the lymphatics, which are anchored by numerous septa to the interstitial fluid compartment.

The modified interstitial fluid from the injured area which returns via lymphatics traverses lymphoid tissue in the lymph nodes. The lymphoid tissue, within 3 to 7 days, responds by liberating antibodies which enter the circulation and return to the injured site where they serve to neutralize the injurious agent by uniting antibody with antigenic substances.

It is customary to describe the immune response which follows the inflammatory reaction to local injury as a co-defensive mechanism, which is highly specific and nearly 100 per cent efficient in its end results. A study of the allergic diseases such as hay fever, asthma, urticaria and eczema and the occurrence of such dramatic reactions as fatal anaphylaxis or extensive necrosis in the Arthus's phenomenon indicates that antibody-antigen reaction is not as accurate and efficient as immunologists lead us to believe.

\* Supported by Grant [REDACTED]

\*\* [REDACTED] B

\*\*\* [REDACTED] C, B

WARNING NOTICE

CONFIDENTIAL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

Moreover, the modern tendency to class the diffuse collagen diseases, such as acute rheumatic fever, rheumatoid arthritis, disseminated lupus erythematosus, polyarteritis, capillary platelet thrombosis, and scleroderma, as modified forms of Arthus's phenomenon indicates that there are additional characteristic or functions of the antigen-antibody reaction that have not yet been elucidated. For a number of years the author has been convinced that one of the functions of the antigen-antibody reaction is to prolong the inflammatory process by liberating irritating amines, which for want of a better term have been described in the literature as "union bodies." It appears that Nature's oldest and most reliable means to combat injury and infection is the inflammatory process, and although the immune process is more modern and efficient, it nonetheless is still mistrusted and provision is made for antigen-antibody union to prolong inflammation under special circumstances. The fact that the combination of antigen and antibody union can itself initiate an inflammatory response is only too well demonstrated in cases of eczema, urticaria and hay fever. It is only with the greatest attention to details that an incipient case of hay fever can be differentiated from a common cold.

Experimentation with several irritating amines has finally permitted the characterization of a substance, which we have termed "alarmine," which we believe is an essential part of antigen-antibody reactions. The liberation of such an amine substance during the antigen-antibody reaction has three separate functions: 1. The irritant amine or alarmines prolongs the local inflammatory reaction. This it does by alteration of the capillary wall of the affected locality in a more marked fashion than histamine or "H" substance. 2. It triggers the general adaptation syndrome in the adrenals, releasing cortisone, which increases the amount of immune globulin liberated through the break-up of lymphoid tissue. If repetitive injury does not occur, the

tendency for alarmine to further prolong the inflammatory reaction is inhibited by adrenal cortical hormones, which reaches the inflamed tissues via the circulation. This cortisone neutralizes the local alarmine effect and further inflammatory response is not provoked. 3. If the amount of antigen is unusually great or if repeated exposure to the antigen occurs alarmine is not neutralized but prolongs the general adaptation syndrome and at the same time provokes an even more marked vascular change, which has been erroneously termed collagenous necrosis, but is instead a misguided form of incipient fibrous repair.

It is the purpose of the present communication to describe the actions of amine irritants of the alarmine class, and to show their role in triggering the alarm reaction in the adrenal and also their role in the production of so-called diffuse collagen disease. We have been able to produce for the first time experimentally rheumatic myocarditis with Aschoff bodies, rheumatoid arthritis with rheumatoid nodules, and a variety of vascular lesions known as diffuse collagen disease, by irritant amines of relative simple chemical structure. (Fig. 1).

Experimental Results of Painting Rats with Alarmine. In the original experiment 24 rats were painted twice daily with a 5 per cent solution of dimethyl dianiline. The solution in sesame oil was applied to a shaved area of skin on the thigh approximately 2 x 3 cm. in size. The rodents died within 36 to 72 hours. Vesicles or ulcerations of the skin appeared in all rats living more than 48 hours. The effect on the epidermis was similar to that of nitrogen-mustard, with destruction of the basal cells of the epidermis and vesiculation of nuclei. In some of these rats at autopsy the adrenals were slightly enlarged and hemorrhagic. It was, therefore, decided to undertake chronic toxicity studies and to study in detail the effect of the compound on the systemic organs, instead of restricting the study to the skin.

SEARCHED  
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 FILED  
 MAR 10 1954  
 FBI - MEMPHIS

From the knowledge of the formula and the effects on the skin and adrenals, it was assumed that one of two things might explain the results. The toxicity of the compound might have destroyed tissue and in this way caused adrenal hyperfunction through an alarm reaction; or the compound could be akin to that studied by Landsteiner, in which phenylamines acting as haptens combined with proteins to produce antibody reactions, thus producing an alarm reaction with first hypertrophy and then exhaustion of the adrenals through an allergic response. The results were puzzling, but interesting.

A second series of experiments were undertaken in which three groups of rats were painted daily on the surface of the shaved skin of the thigh over an area of approximately 2 x 3 cm. These were Wistar rats weighing 120 Gm.

Group I, consisting of eight rats, was painted with a 2 per cent solution in sesame oil daily except Sunday. Four untreated rats served as controls.

Group II, consisting of eight rats, was painted with a 1 per cent solution in sesame oil daily except Sunday. Four untreated rats served as controls.

Group III, consisting of eight rats, was painted with a 0.5 per cent solution in sesame oil daily except Sunday. Four untreated rats served as controls.

Group I, High Dosage. The rats died between 10 and 15 days, on the average of 12 days. They showed stationary weight. The skin showed some ulceration and vesicles, but not as severe as with the 5 per cent solution. Grossly, the adrenals did not appear to be markedly enlarged. The spleen and lymphoid tissues showed slight atrophy. The lungs showed increased secretion in the bronchi, and these rats seemed to die of pulmonary edema and congestion. The heart was dilated. Microscopically, the pulmonary edema was due to exudation of plasma (so-called lymphorrhagia) about the smaller blood vessels in the lung. The basement membrane of these smaller vessels showed smudging and dissolution and the endothelial lining cells projected into the lumen and some were detached. In the heart there was an accumulation of spindle cells <sup>between</sup> (endothelial

ial cells liberated by dissolution of adjacent capillaries) lying between

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 GROUP 1  
 CLASSIFIED

the myocardial fibers, where they had been separated by edema fluid from leaking vessels similar to those found in the lungs. Some of the sections showed typical Aschoff bodies (Fig. 2 and 3). There were numerous dilated vascular spaces lined by a single layer of endothelium and many extravasated erythrocytes. In the synovial membranes of the knee joint the capillaries were dilated and filled with red cells, some of which were undergoing lysis. There was smudging of the ground substance immediately beneath the mesothelial lining layer. In the bone marrow the capillaries were similarly dilated and there were areas of coagulated extravasated fluid. The bone marrow elements were intact. The spleen showed almost complete disappearance of lymphoid pulp. The surviving germinal centers showed evidence of necrosis. Other organs were negative.

Group II. Middle Dosage. These rats lived a maximum period of 2 months, and they died between the 30th and 60th day. They showed failure to gain weight. At autopsy, grossly, the lungs were congested and showed pulmonary edema and increased secretion in the bronchi. There was some thickening of the arteries in the lungs, but not the veins. Histologically, there was some "onion peeling" of small arteries and arterioles, but some of the controls showed similar changes. The heart was dilated and the adrenals were enlarged. Microscopically, the adrenals showed hypertrophy and hyperplasia confined to the cortex. The spleen and lymphoid tissues were similar to Group I. Microscopically, the spleen showed reduction of lymphoid tissue and necrosis of the germinal centers. There was increased number of macrophages in the pulp with numerous binucleated forms. (Figure 4) and 5). The heart showed focal fibrosis with Anitschkov's cells and some Aschoff bodies, and about this there were areas of fibrinoid degeneration. The joint changes in animals that died early were similar to Group I. Other organs were negative.

Group III. Low Dosage. Some of the rats in this group died 6 weeks after the beginning of the experiments, but some were still living 3 months

later. At autopsy, the outstanding finding was endothelial proliferation of the lining of small pulmonary vessels, so that their lumen was practically occluded. Some of the vessels looked like they were being recanalised and some looked almost like glomeruli. The endothelial proliferation in places extended out into the adjacent septa of the lung. This was found in only two rats, who apparently inhaled the alarmine while licking their wounds. (Fig. 5). The spleen was practically devoid of lymphoid tissue and nearly double in size. The pulp contained many macrophages with numerous foam cell types and there were some granulocytes but practically no lymphocytes. A few germinal centers were intact. The heart showed areas of fibrinoid degeneration and typical Aschoff bodies with Anitschkow's cells. In other vessels, the walls of the capillaries were disintegrating, and the liberated endothelial cells accumulated about arterioles to form typical Aschoff bodies. The adjacent myofibrils were necrotic and hyalinized. These changes were not as widespread as in the rats on higher dosage.

The knee joints on microscopic examination showed rheumatoid arthritis with the formation of rheumatoid nodules in the synovial membrane. (Fig. 6). The bone marrow was not remarkable. The brains and kidneys were normal in appearance. In the region of the kidneys and pancreas small to medium-sized vessels showed thrombocytosis or marked endothelial proliferation similar to that found in the lungs. (Fig. 7).

The skin showed epidermal hyperplasia in the painted areas. In the subcutaneous tissue of these rats there was marked edema simulating a stage in scleroderma, except that the location was not in the derma and was unaccompanied by atrophy of the hair follicles. In the voluntary muscles beneath the painted areas there were also collections of plasma cells and lymphocytes and damage to blood vessels simulating the lesions of dermatomyositis. (Fig. 9).

In the liver there were increased numbers of cells with acidophilic

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~~GENUINE INFORMATION~~  
~~SECURITY AND METHODS INFORMATION~~

cytoplasm and binucleated forms. Some of the vessels showed endothelial proliferation as in the lungs. There seemed to be acidophilic inclusions resembling Councilman's bodies. Some of the liver-cells were vacuolated; others showed hyalin droplet degeneration, and the nuclei were of varying size and density. (Fig. 10). The control rats showed no significant changes.

Effect of Alarmins on the Cement and Ground Substances. The primary effect of alarmins is to produce hydration of the mucopolysaccharide structure of basement membranes and ground substance in mesenchymal tissues. The most sensitive tissue component is the cement substance in the endothelial wall of capillaries; perhaps because this is the site of the initial contact in the tissue. The earliest change is softening which allows the capillary wall to stretch and form aneurysmal dilatations. (Fig. 11). In the basement membrane behind the endothelium in precapillary arteries and in arterioles, this hydration can be seen histologically as a chain of small bubbles, which we have termed beading. (Fig. 12). In the next stage the capillary wall disintegrates and the viable endothelial cells and intact erythrocytes spill into the tissue spaces. (Fig. 13). In the heart the liberated endothelial cells from the coronary capillaries migrate toward damaged arterioles and form perivascular Aschoff bodies. In subsequent stages there is more widespread damage to the connective tissue components. This results in fusion of erythrocytes, condensation of ground substance to form fibrinoid degeneration and liquefaction of other portions of the ground substance probably due to its infiltration by plasma leaking from the ruptured capillaries, and shredding of the collagen fibers with subsequent necrosis of these structures and adjacent muscle cells. Depolymerization and hydrolysis affects the nonviable cement and

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~~SENSITIVE INTELLIGENCE~~  
~~SCIENCE AND MATHEMATICS INFORMATION~~

ground substance and fibers of vessels and connective tissue. Alarmin decomposes these nonviable components of stromal tissue, which are technically known as mucopolysaccharides and scleroproteins. This target tissue is the identical structure damaged by vitamin C deficiency and by hyaluronidase, and it is the same structure which is strengthened and rendered more resistant to this effect by cortisone. Alarmin is, therefore, an antagonist of vitamin C and cortisone and the artificial tanning substances, such as the quinolines.

If we analyze this pathologic series of responses into its major components, we find that intense injury by alarmin is an exaggeration of the pathologic process found in the simple healing of wounds, which has been termed organization. Here the injured tissue releases minimal amounts of alarmin which produces matrix hydrolysis and capillary aneurysmal dilatation of the capillaries due to the flaccid state of their walls. Because of the chemotaxis of the capillary endothelium for the hydrated matrix in the injured area, so-called capillary sprouts are dragged into the wound. The histologic picture that results is known as granulation tissue.

The primary effect of alarmin in producing the changes of rheumatoid carditis, rheumatoid arthritis and polyarteritis is on the basement membrane of blood vessels and not primarily on the collagen fibers of connective tissue. According to the latest chemical studies of collagen, the fibrinoid degeneration where it occurs in connective tissue does not involve the collagen bundles of well-formed connective tissue fibers. In order to emphasize the exact sequence of events it is important to review the histological and biochemical composition of connective tissue.

Robb-Smith<sup>2</sup> has defined connective tissue as a continuous matrix varying in consistency from the limpness of Wharton's jelly of the umbilical cord to the hardness of bone in which lies an interlacing fabric of fibers of different and is bathing isolated or closely set cells. This continuous matrix pervades the spaces between organs and major

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rheumatoid and collagen diseases that we are discussing is a depolymerisation of cementin with leakage and hydration of the ground substance with secondary loss of collagen fibrils. In response to the hydration of the ground substance, the connective tissue cells proliferate and contribute to the Aschoff bodies (which at first contain only liberated endothelial cells from destroyed capillaries) and form rheumatoid nodules, which are so characteristic of the rheumatoid state. Since the basement membrane is the primarily affected structure and this is composed of condensed ground substance and reticulin fibers and not of the more highly differentiated collagen fibers, the term collagen disease does not describe the primary process. The fibrinoid degeneration observed is a coagulum of the ground substance and cement substance. The endothelial aggregates, which previously have been neglected, are provided by separation of the endothelial cells from altered or dissolved capillaries. Endothelial proliferation and fibrocytic proliferation both contribute to the formation of the Aschoff body and are both secondary to the freeing of these fixed cells which come to lie free in a fluid matrix, which is mostly blood plasma and partly hydrated cement substance and matrix.

#### Role of Adrenal in the General Adaptation Syndrome

There is good reason to believe that the general adaptation syndrome of Selye<sup>3</sup>, in which the adrenal cortex plays the dominant role, serves as a co-defensive mechanism both in local tissue damage and in the immunological responses of the reticuloendothelial system. Sayers<sup>4</sup> believes that products of tissue damage following severe injury combine with cortical hormones in the peripheral tissues, and with the resultant fall in their concentration in the venous blood, this normal check on the adenohypophysis is released and the pituitary responds by increased secretion of ACTH. This resultant increase in the output of ACTH depletes the adrenal cortex of its hormones and stimulates additional hormone production.

If the period of stress is prolonged or continued, stimulation produces cortical hyperplasia and enlargement of the adrenals. This cortical hyperfunction results in alteration of carbohydrate, protein and fat metabolism. There is also an elevation of sodium electrolytes in the serum, which increases the resistance of the animal by expanding the metabolic pool and the volume of tissue fluids. At the same time, there is increased excretion of such toxic products as potassium, histamines and uric acid. Simultaneously, the immune mechanisms are reinforced by destruction of lymphocytes resulting in lymphocytopenia, eosinopenia and leucocytosis. Since lymphocytes store immune globulins, their disintegration leads to a rapid rise in antibody titer.

If exposure to stress continues, the adaptation syndrome fails and is followed by exhaustion. Selye believed that the excessive drain on the anterior pituitary and adrenal cortical hormones incident to protracted or repeated trauma may result in cardiovascular renal and joint disease, and he lists such entities as nephrosclerosis, polyarteritis, carditis and arthritis as adaptation diseases. However, the consensus of present day opinion holds that these are forms of diffuse collagen disease resulting from hyperimmunity. Talbot and Ferrandis<sup>5</sup> believe that the etiology of these conditions is still unknown and that no investigation has successfully reproduced them in animals except for polyarteritis in rabbits and the occurrence of disseminated lupus erythematosus in humans following the administration of the antihypertensive drug, hydralazine (Apresaline).

In the authors' opinion, it is now possible to demonstrate that similar irritating amines are released in tissue damage, where they have been customarily referred to as "H" substances, and in the union of antigen and antibody, where they have been termed "union substances." These irritating

amines, which we have termed alarmines, neutralise adrenal cortical hormones in the tissues and thus release ACTH and stimulate the general adaptation syndrome. They are in turn neutralised by increased excretion of adrenal cortical hormones if bodily resistance is adequate (the resistance phase of Selye).

However, if tissue damage is overwhelming the body passes rapidly through the phases of alarm and resistance to exhaustion. Such acute exhaustion is synonymous with irreversible shock or peripheral vascular failure (so-called forward cardiac failure). If overwhelming acute stress involves the immune mechanism, the high concentration of unneutralized alarmine provokes the Arthus's phenomenon with its characteristic vascular thrombosis and resultant tissue necrosis. If stress is unduly prolonged by repeated exposure to infections or similar antigens, the continued and increasing release of unneutralized alarmine exhausts the adrenals or exceeds their protective capacity (even in the presence of cortical hypertrophy), and collagen disease results.

#### The Stress Aspects of Alarmine

In the experiments reported above the adrenal cortical enlargement observed may be considered an indirect effect of alarmine, which neutralises cortisone in the tissues and thus stimulates the adenohypophysis, which releases ACTH to bring about the cortical hyperplasia. Another interpretation, however, is possible. The alarmine may act directly on the adrenal medulla, which in turn releases adrenalin to stimulate the adenohypophysis to secrete increased ACTH. This second interpretation is suggested by the degenerative changes in the adrenal medulla, which were observed in a further group of experiments described below. Whether either or both mechanisms apply, the fact remains the adrenals undergo enlargement (in some animals to four times their normal weight). The changes in the lymphoid tissue, particularly marked in the spleen, are the result of the adrenal cortical hyperplasia. The alarmine in any event initiates the adaptation syndrome.

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In order to demonstrate the relationship of alaraine to cortisone and to the stress phenomenon, which Selye has termed the general adaptation syndrome, a third group of experiments was performed. The rats used were males of the Wistar strain, weighing 100 gm. each, and were injected intramuscularly six days weekly for 25 days and then sacrificed. The tissues of all major organs were examined.

Group I consisted of six control rats, receiving 1/2 cc. of normal saline. No significant changes were observed in this group. One animal had murine pneumonitis, and one had some increase in the connective tissue cells between the myocardial fibers.

Group II consisted of 6 rats, receiving 0.1 cc. each of spirits of turpentine. These rats were sacrificed on the ninth day. They showed mild perivascular edema and separation of connective tissue fibers about small vessels, but none of the striking changes observed with alaraine. There was no adrenal hypertrophy.

Group III consisted of 6 rats, receiving 1 mg. daily of an amine compound in which methyl piperazine was linked with propanol to dimethyl piperazine. No significant changes were observed in these rats, when sacrificed on the 26th day.

Group IV consisted of 6 rats, receiving 2.5 mg. daily of an amine compound, in which methyl piperidine was linked with another molecule of piperidine by propanol. No significant changes were observed in these rats when sacrificed on the 26th day.

Group V consisted of 6 rats, receiving 0.1 mg. daily of alaraine. These rats were sacrificed on the 26th day. They showed changes in the lungs, heart, joints, spleen and adrenals similar to those reported above in the rats painted with 0.5 per cent solution of alaraine in sesame oil.

Group VI consisted of 6 rats, receiving 0.1 mg. of alaraine daily, plus 2.5 mg. daily of procaine HCl. These rats were sacrificed on the 26th day.

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They showed changes similar to those in Group V, but the changes were slightly more pronounced. The reason for this, in our opinion, is that the procaine inhibited pain and irritation from the alaraine in the local tissues, and thus did not provoke such a pronounced cortical response in the adrenals. In other words, there was less stress phenomenon provoked in the adrenal.

Group VII consisted of 6 rats, receiving 0.1 mg. of alaraine daily, plus 1 mg. daily of cortisone. These rats were sacrificed on the 26th day. No significant change was observed in any organ. The cortisone had completely inhibited the response to alaraine.

Conclusion

It may be concluded from the above experiments and observations that a diamino benzene derivative, which we have termed alaraine, is a relatively specific irritant amine, which is capable of hydrolysing the cement and ground substances of connective tissue and of producing the so-called collagen diseases. At the same time it provokes the general adaptation syndrome, but if given in sufficient amounts or concentration it is capable of overriding the protective response of the general adaptation syndrome, which it provokes. This irritant amine can be neutralized in its pathologic effects by the simultaneous administration of sufficient amounts of cortisone.

The collagen diseases which we believe to be reproducible with this substance are: rheumatic carditis, rheumatoid arthritis, scleroderma and dermatomyositis, and polyarteritis. In the experiments recorded above glomerulonephritis and membranous glomerulitis with wire-looping in the capillary loops of the nephron characteristic of disseminated lupus erythematosus were not observed. Since this is undoubtedly a collagen disease, an attempt to produce such changes was made in a final group of experiments. Six Wistar male rats, weighing 60 to 80 Gm., were painted daily with a 2 per cent solution of alaraine to a shaved area of the thigh 2 x 3 cm. The smaller rats were chosen in preference to raising the

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alarmine dosage. These rats died after three days and complete autopsies were performed. They showed changes in the heart and joints characteristic of early rheumatic carditis and rheumatoid arthritis, as previously described. In addition, all of the rats showed membranous glomerulonephritis, with wire-loops characteristic of disseminated lupus erythematosus. There were also vascular lesions in the brain, such as are seen in collagen diseases, and small focal accumulations of gitter cells, resembling typhus nodules, a reaction to vascular damage. The type of collagen disease observed, therefore, is dependent upon the concentration of alarmine released in the tissues.

~~WARNING PHOTO~~

~~DOMESTIC INTELLIGENCE~~  
~~COMBINATION METHODS INVOLVED~~

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- 1. Landsteiner, Karl: The Specificity of Serological Reactions, Harvard University Press, Cambridge, Mass., 1945.
- 2. Robb-Smith, A. H. T.: The Functioning Significance of Connective Tissue. Lectures on the Scientific Basis of Medicine, Vol. 2, 1952-1953, Univ. of London, The Athlone Press, 1954.
- 3. Selye, Hans: Stress, Acta., Inc., Med. Publishers, Montreal, Canada, 1950.
- 4. Sayers, G.: Adrenal Cortex and Homeostasis. Physiol. Rev. 30:241, 1950.
- 5. Talbott, J. H. and Ferrandis, R. M.: Collagen Diseases, Grune & Stratton, New York, 1956;

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~~SENSITIVE INFORMATION~~  
~~NO METHODS INVOLVED~~

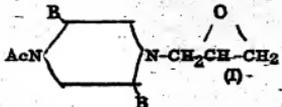
- 45-112
- 26
- Figure 1. Formula of Alarminae
- Figure 2. Change in Vessels in Lung
- Figure 3. Aschoff Bodies in Heart
- Figure 4. Changes in Adrenal
- Figure 5. Changes in Spleen
- Figure 6. Rheumatoid Arthritis of Knee Joint
- Figure 7. Thrombonecrosis of Artery in Renal Fat
- Figure 8. Subcutaneous Scleroderma
- Figure 9. Dermatomyositis
- Figure 10. Liver Changes
- Figure 11. Capillary Aneurysms
- Figure 12. Beading of the Basement Membrane
- Figure 13. Capillary Dissolution with Liberation of Endothelial Cells

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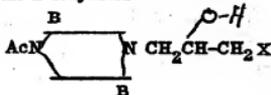
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SOURCES AND METHODS INVOLVED

1. Code: Ac. 7. 2

This synthetic work relates to compounds of the structure

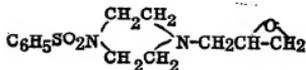
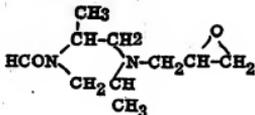
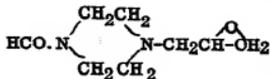


and the halohydrins



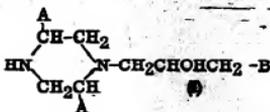
which may be used in the synthesis of I, where AC is a member of the group made up of acyl, aryl sulfonyl and alkyl sulfonyl, and B is a member chosen from the group made up of H and CH<sub>3</sub> and X is a member of the group made up of chloride, bromide and iodine.

Typical compounds to be included:

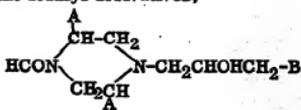


2. Code: Ax7 Cx7

This synthetic work relates to compounds of the structure



their acid addition salts and quaternary ammonium salts,  
and the formyl derivatives,



which may be used in the synthesis of I

where A is a member chosen from the group made up of H and CH<sub>3</sub>,  
and B is a monovalent amino radical which is a member taken from  
the group made up of the following:

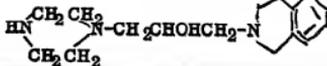
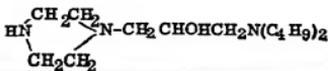
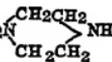
- (1) a radical of the structure RNH- where R is an alkyl radical from 1 to 4 carbons  
R'
- (2) a radical of the structure -N  
R''

where R' and R'' are alkyl radicals, the total carbon content of which is between 2 and 8

(3) a heterocyclic radical which is a member of the group made up of  
pyrrolidino, piperidino and morpholino

- (4) 1-(1, 2, 3, 4-tetrahydroquinolino), 1-(decahydroquinolino),  
1-(6-methoxy-1, 2, 3, 4-tetrahydroquinolino) and  
2-(1, 2, 3, 4-tetrahydroisoquinolino).

Typical compounds: CH<sub>3</sub>NHCH<sub>2</sub>CHOHCH<sub>2</sub>N

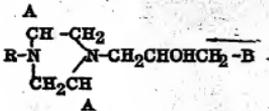


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SOURCES AND METHODS INVOLVED



4. Code: R. 7xC R. 7xA

This synthetic work relates to compounds of the structure



their acid addition salts and quaternary ammonium salts,

where R is a member taken from the group made up of alkyl

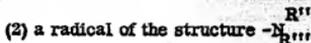
radicals of from 1 to 6 carbons, benzyl and benzhydryl,

where A is a member chosen from the group made up of H and CH<sub>3</sub>

and B is monovalent amino radical which is a member taken from the group

made up of the following:

(1) a radical of the structure R'NH where R' is a member chosen from the group made up of H and an alkyl radical of from 1 to 4 carbons



where R'' and R''' are alkyl radicals, the total carbon content of which is between 2 and 8 inclusive

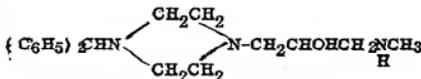
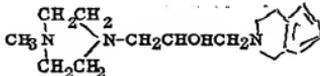
(3) a heterocyclic radical which is a member of the group made up of pyrrolidino, piperidino and morpholino

(4) 1-(1, 2, 3, 4-tetrahydroquinolino), 1-(decahydroquinolino),

1-(6-methoxy-1, 2, 3, 4-tetrahydroquinolino) and

2-(1, 2, 3, 4-tetrahydroisoquinolino).

Typical examples:



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~~SOURCES AND METHODS INFORMATION~~

45-113

PROPOSED BUDGET

1957 - 1958

Analysis of Body Fluids in Toxic States

Biochemists (2)	\$16,000.00	
Technicians, Laboratory (2)	6,000.00	
Special Equipment	10,000.00	
Supplies	8,000.00	
Clinical Assistant	<u>6,000.00</u>	\$ 45,000.00

Chemical Synthesis

C [REDACTED] Consultant	1,500.00	
C [REDACTED] B	4,500.00	
B [REDACTED] (chemical syntheses)	<u>20,000.00</u>	26,000.00

Toxicology and Pharmacology

Animal caretaker and animals	12,000.00	
Pharmacologist and technician	12,000.00	
C [REDACTED] Toxicology	<u>5,000.00</u>	<u>29,000.00</u>

TOTAL \$ 190,000.00

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~~RESTRICTED INFORMATION~~  
~~SOURCES AND METHODS CONFIDENTIAL~~

RECEIPT

I hereby acknowledge receipt of the following check:

Official Check No. G 11510, dated September 17, 1956, drawn on the  
[REDACTED], in the amount of \$34,000.00,  
payable to [REDACTED] B

Date: 27 Sept 56

A

45-114

45-118

10 September 1956

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA: TSS/Budget Officer

SUBJECT: MKULTRA Subproject 45  
Invoice No. 6, Allotment 6-2502-10-061

1. Invoice No. 6 for the above subproject is attached. Payment should be made as follows:

(E)

Cashier's check in the amount of \$24,000.00, drawn on a [redacted] bank.

(B)

The check should be made payable to the [redacted]

(B)

2. Please forward the checks to Chief, TSS/Chemical Division through TSS/Budget Officer by Friday, 5 October 1956.

3. This is a final invoice. A total of \$133,000.00 was obligated under this subproject during FY 56. However since it is anticipated that additional funds will be obligated for this project, the files should not be closed.

(E)

CHECK <sup>Case</sup> IN THE AMOUNT OF \$24,000  
RECEIVED 26/9/56

(A)

[redacted]

SIDNEY GOTTLIEB  
Chief  
TSS/Chemical Division

Attachments:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee  
1 - Comptroller  
✓ 1 - TSS/FASB  
1 - 2 TSS/CD

I CERTIFY THAT FUNDS ARE AVAILABLE:  
OBLIGATION REFERENCE NO. 453  
CHARGE TO ALLOTMENT NO. 6-2502-10-061  
AUTHORIZING OFFICER [redacted]

12/25/56

(A)

TSS/CD: [redacted] (10 September 1956)

(A)

071  
255 13 2 58 41 22

(A)

[redacted]

[redacted]

45-115

[REDACTED]

**INVOICE**

**For services**

**\$34,000.00**

[REDACTED]

(B)

-----

**CERTIFICATIONS**

(1) It is hereby certified that this is Invoice No. 6 applying to Subproject 45 of MKULTRA, that performance is satisfactory, that the services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

Chief, TSS/Chemical Division

Date:

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date:

[REDACTED]

45-116

RECEIPT

FILE SUB PROJECT  
45?

I hereby acknowledge receipt of  
Official Check # MN240957 in the amount of \$33,000.00,  
payable to the

(E) (B)

[REDACTED]

(C)

Date 6 June 1976





45-119

11 June 1959

**MEMORANDUM FOR: CHIEF, FINANCE DIVISION**

**VIA : TSS/Budget Officer**

**SUBJECT : MKULTRA, Subproject 45, Invoice No. 14  
Allotment 9-2502-75-902**

1. Invoice No. 14 covering the above subproject is attached.  
Payment should be made as follows:

(E) Cashier's check in the amount of \$35,750.00,  
drawn on a ██████████ Bank.

(B) The check should be made payable to the ██████████

2. Please forward the check to Chief, TSS/Chemical Division,  
through TSS Budget Officer, no later than 22 June 1959. Other  
invoices will follow.

(A)

██████████  
Chief  
TSS/Chemical Division

**Attachments:**  
Invoice & Certifications

**Distribution:**  
Orig & 2 - Addressee  
1 - TSS/FASB  
2 - TSS/CD

(A) TSS/CD ██████████ (11 June 59)

I CERTIFY THAT FUNDS ARE AVAILABLE  
ORIGINATION REFERENCE No. 1913  
CHARGE TO ALLOTMENT No. 9-2502-25-902  
\_\_\_\_\_  
AUTHORIZING OFFICER

██████████

45-119

~~CONFIDENTIAL~~  
**INVOICE**

**For services**

**\$35,750.00**

~~CONFIDENTIAL~~

-----  
**CERTIFICATIONS**

(1) It is hereby certified that this is Invoice No. 14 applying to Subproject 45 of MKULTRA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipt is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

C/TSS/Chemical Division

**Date:**

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

*Original signed by*  
~~CONFIDENTIAL~~

Research Director

**Date:** 11 JUN 1959

~~CONFIDENTIAL~~

FILE 45

RECEIPT

I hereby acknowledge receipt of the following check:

Official Check, dated March 1, 1956, in the amount of \$33,000.00,  
E drawn on ██████████, payable to the  
B ██████████. The check number is  
NO 228791.

██████████ A

Date: 7 March 1956

For forwarding

46-121  
23 May 1956

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA: TSS/Budget Officer

SUBJECT: MKULTRA Subproject 45, Invoice No. 5  
Allotment 6-2502-10-001

(E)  
(B) 1. Invoice No. 5 for MKULTRA Subproject 45 is attached. Other invoices will follow later. It is requested that payment be made by cashier's check in the amount of \$33,000.00. The check should be drawn on [redacted] bank and made payable to the [redacted]

2. Please forward the check to Chief, TSS/Chemical Division through TSS/Budget Officer by 7 June 1956.

(A) [redacted]  
Acting Chief  
TSS/Chemical Division

Attachments:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addresses  
1 - Comptroller

(E) ✓ 1 - TSS/FASB [redacted]  
2 - TSS/CD

(A) TSS/CD: [redacted] (22 May 1956)

I CERTIFY THAT FUNDS ARE AVAILABLE  
OBLIGATION REFERENCE NO. 427  
CHARGE TO ALLOTMENT NO. 6-2502-10-001

AUTHORIZING OFFICER  
[redacted]

MIN  
CHECK # 21087 IN THE AMOUNT OF \$33,000.00  
RECEIVED 5 JUN 1956

(A) [redacted]  
001

MAY 25 5 02 PM '56

23111122

4-127

~~SECRET~~  
INVOICE

For services

\$33,000.00

(B) ~~SECRET~~

---

CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 5 applying to Subproject 45 of MKULTRA, that performance is satisfactory, that the services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

Acting Chief, TSS/Chemical Division

Date:

(2) It is hereby certified that this invoice applies to Subproject 45 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date:

~~SECRET~~

45-122

21 February 1956

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : MEXLTRA Subproject 45, Invoice #4  
Allotment 6-2502-10-001

1. Invoice #4 for MEXLTRA Subproject 45 is attached. Other invoices will follow later. It is requested that payment be made by cashier's check in the amount of \$33,000.00. The check should be drawn on a [redacted] bank and made payable to the [redacted].

(E)  
(B)

2. Please forward the check to Chief, TSS/Chemical Division through TSS/Budget Officer by 5 March 1956.

(A)  
(E)

[redacted]  
Deputy Chief  
TSS/Chemical Division  
[redacted]

Attachments:  
Invoice & Certifications

CHECK # 22879 IN THE AMOUNT OF \$33,000  
RECEIVED 6 MAR 1956

Distribution:  
Orig & 2 - Addressee  
1 - Comptroller

(A)

(A)  
TSS/CD [redacted] 6001-6-2502-10-001-17-9-433000.00

Cash

33,000.00

INVOICE ATTACHED

CERTIFIED FOR PAYMENT OR CREDIT

(A)

AUTHORIZED SIGNATURE OFFICER

1028 USE ONLY  
I CERTIFY THAT FUNDS ARE AVAILABLE:  
CAUTION REFERENCE No. 1439  
CHECK TO BUDGET OFFICER 6-2502-10-001

RECEIVED

SECRET

445-122

INVOICE

21 Feb 56

Fur services

\$33,000.00

(B)

[REDACTED]

CERTIFICATIONS

(1) It is hereby certified that this is Invoice 4 applying to Subproject 45 of MULLTRA, that performance is satisfactory, that the services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CD, that this bill is just and correct and that payment thereof has not yet been made.

Date:

Chief, TSS/Chemical Division

(2) It is hereby certified that this invoice applies to Subproject 45 of MULLTRA which was duly approved, and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DE/A, and the extension of this authority in subsequent memoranda.

Date:

Research Director

[REDACTED]

MEMORANDUM OF AGREEMENT

B The purpose of this memorandum is to set forth the mutual administrative responsibilities of the [redacted] hereafter known as the [redacted] the principal investigator, and the sponsor. Therefore, it is mutually agreed that,

B A. the principal investigator shall submit for the sponsor's inspection the [redacted] annual audit report, certified by a CPA.

B. The bank statements and cancelled checks of the special account, maintained for third party disbursements, shall be submitted for inspection upon the sponsor's request.

B C. It is understood that any travel expenses incurred in the furtherance of the research program will be accounted to the [redacted] in a manner consistent with its established practices and policies.

D. Upon the request of TSS/CD, the principal investigator shall submit to the sponsor reports of technical progress in the research covered by these funds.

C

Date: 2/1/56



Downgraded to: CONFIDENTIAL  
by authority of 187475  
Date: June 1984

E2 IMPDET; CL BY 187475

45-124  
(A) DRAFT: [REDACTED]  
30 January 1956

MEMORANDUM FOR: THE RECORD

SUBJECT: Project MKULIRA, Subproject 45

- (B) 1. The scope of this project is intended to encompass all those activities now engaged in by the [REDACTED] under the direction of TSS/CD. These activities take the form of three lines of biochemical investigation, namely, the Curare-like effect of certain thiols, the preparation of hydrogenated quinolines and indole alkaloids and a program of investigation of toxic cerebral states. This last investigation will include bio-assay and chemical analysis of various body fluids of animals in which cerebral toxemias have been produced. It is the aim of this program to endeavor to understand the mechanism of such states as toxic delirium, uremic coma, and cerebral toxicity from poisoning. In order to continue the established "cover" activities of the [REDACTED] and to make available a pool of subjects for testing purposes, the [REDACTED] and [REDACTED] effects of compounds resulting from the above program will be evaluated.
- (C) 2. The attached proposal from [REDACTED] indicates the extent of the investigations that his facilities will allow him to carry out on the materials developed in the three lines of research referred to in paragraph one, as well as certain other materials of interest to TSS/CD. [REDACTED] also serves as a general consultant to this Division and provides cover and cut-out facilities to the Agency.
- (C) 3. The total cost of this project for a period of one year will not exceed \$100,000. Charges should be made against Allotment 6-2502-10-001.
- (C) (B) 4. [REDACTED] has been requested to submit a summary accounting or a copy of the [REDACTED] annual audit report be made available for the sponsor's inspection. Also, it has been requested that any unexpended funds shall be returned to the Agency.
- (B) (C) 5. Title to any permanent equipment purchased by funds granted [REDACTED] shall be retained by the [REDACTED] in lieu of higher overhead rates.

\* other than its activities as a cut-out

Downgraded to: CONFIDENTIAL  
by authority of 187475  
Date: June 1984

E2 IMPDET; CL BY 187475

45-124  
Downgraded to: ~~CONFIDENTIAL~~  
by authority of 187475  
Date: June 1977

E2, UNCLAS; CL BY 187475

- 2 -

- (B) 6. It was mutually agreed that documentation and accounting for  
(B) travel expenses which are normally reimbursable by the [REDACTED]  
(B) [REDACTED] shall conform with the accepted practices of the [REDACTED]
- (B) 7. [REDACTED] agreed to comply with the requirements of  
the Memorandum of Agreement.

(A) [REDACTED]

TSS/Chemical Division

APPROVED:

*[Signature]*  
Chief, TSS/Chemical Division

APPROVED FOR OBLIGATION  
OF FUNDS:

(A) [REDACTED]

Research Director

Date: 2 Feb 1976

Attachment:  
Proposal

Distribution:  
Original Only

Downgraded to: ~~CONFIDENTIAL~~  
by authority of 187475  
Date: June 1977

E2, UNCLAS; CL BY 187475

45-124

~~WARNING NOTICE~~  
~~CONFIDENTIAL INFORMATION~~  
~~EXCEPT THE METHOD DESCRIBED~~

RESEARCH PROPOSAL

(B) [REDACTED]

February 1956 - 1957

Part I

Bio-assay and Chemical Analysis of Body Fluids in Toxic Cerebral States

General Survey of the Problem

There are a variety of clinical conditions, many of them terminal, in which patients under clinical observation pass from mild disorientation into delirium and coma. These conditions of cerebral intoxication are often associated with the failure of some vital organ other than the brain. The most important forms of such cerebral intoxications are

- 1 - Uremic coma associated with renal failure
- 2 - Hepatic coma associated with liver failure
- 3 - Convulsions and coma of eclampsia associated with the pathology of the placenta and involving also the liver and kidneys
- 4 - Malignant cachexia associated with advanced carcinomatosis
- 5 - Toxic delirium associated with severe bacterial infection, at times with a generalized septicemia or bacteremia
- 6 - Delirium, coma and convulsions resulting from chemical poisoning in which the toxic substance may act directly or indirectly on cerebral tissue.

1 - Uremia. A review of the current texts and contributions to medical journals reveals a remarkable lack of information concerning these forms of cerebral intoxication. Thus, in uremia there is a wide difference of opinion in regard to the identity of the urinary constituents retained in the blood which are responsible for the effects on the central nervous system. Fishberg states that after a hundred years of search for the "uremic principle" its identity still remains a mystery. Homer Smith, in his work on the kidney, stresses the importance of potassium retention. Others have implicated the magnesium ion. Most authors

on the subject believe that the cerebral effects of uremia are the result of retention of phenolic compounds. A smaller number believe that retained nitrogenous substances such as indican and unidentified products of intermediary protein metabolism are the responsible agents. The only sphere of agreement is the well-established fact that injection of normal urine into laboratory animals in adequate doses will produce coma and death, whereas the urine from patients in uremia is relatively non-toxic, the toxic substances remaining in the bloodstream of the affected individuals. It is interesting to note in the transactions of the Macey Foundation on Renal Function from 1949 to 1953 that a conference has not been devoted to the subject of uremia.

2 - Hepatic Coma. The cerebral effects of hepatic failure consisting of high fever and progressively deepening coma have been stressed by Heyd, and are often known as the Heyd syndrome. The cause of the coma is generally attributed to the retention of ammonia or ammonium carbonate. However, with the introduction of the artificial kidney the removal of ammonia by dialysis, which is readily accomplished, has been shown to have no influence on the comatose condition of the patient. Some investigators have postulated the retention of bile acids as the cause of the coma. There is even less information available on hepatic coma than on uremia.

3 - Eclampsia. Eclampsia remains "a disease of theory". The convulsions and coma that occur in these patients are of unexplained origin. The consensus of opinion to date is that the effects are brought about by spasm of the smaller blood vessels but the cause of the vascular spasm remains undetermined.

4 - Cachexia. The disorientation and coma of patients with cachexia resulting from malignant disease have provoked remarkably little attention in recent years. Willis believes that the cachectic state is an expression of malnutrition with the retention of acetone bodies and is therefore related to diabetic coma. However, there are no adequate studies to substantiate this theory and the treatment of such patients with intravenous glucose and injections of insulin has not been carried out to my knowledge.

CONFIDENTIAL  
CONFIDENTIAL  
CONFIDENTIAL

5 - Toxic Delirium. Before the days of penicillin and the antibiotics, disorientation and delirium were frequent complications of severe infection. It was common in pneumonia and treated by forcing fluids either intravenously or by mouth. However, the toxic effects on the central nervous system of common infectious organisms received no detailed study. In general, the cause of the delirium was related to the severity of the infection.

In summarizing the known facts about uremia, hepatic coma, eclampsia and toxic delirium we can say that the specific cause of the cerebral depression remains unknown in all of them. The only common pathologic effect is the lowering of the cerebral uptake of oxygen. This, however, apparently is a consequence of the suppression of cerebral function rather than a causative factor.

6 - Cerebral Toxicity Associated with Poisoning. The terminal stage of most forms of poisoning is usually described as "Convulsions, coma and death". The localization of the underlying cerebral effects, however, has not been ascertained for the systemic poisons. In an attempt to arrive at a compendium of present day information we have summarized the pathology of various forms of poisoning in the tabulations submitted with this proposal.

Plan of Procedure

Analysis of Body Fluids. We propose to establish a laboratory for the chemical analysis of body fluids in the toxic cerebral states. When patients with toxic cerebral manifestations are under observation in the hospital for uremia, hepatic coma, eclampsia, malignant cachexia, etc., blood serum, cerebrospinal fluid, intraperitoneal fluid and pleural fluid will be obtained and fractionated for possible toxic components such as phenol, bile acids, toxic amines and other components that may be found of interest as the project develops. This analytical laboratory will employ two biochemists. One will be associated with the routine service laboratories at the (B) [redacted] and will supervise the collection and

preservation of these materials and will provide the routine analysis of their constituents which can be determined by known chemical technics such as determination of potassium, sodium and other inorganic constituents, their organic constituents such as bile acids, urea, non-protein nitrogen, CO<sub>2</sub> combining power, etc. The other biochemist will be engaged in specialized chemical analysis, such as electrophoresis, spectrographic analysis, etc. and will try to devise new methods for the determination of toxic amines, phenols, etc.



Bio-Assay of Body Fluids. Another laboratory will be maintained in the animal house for bio-assay on laboratory animals of the toxic constituents isolated in the chemical laboratory.

Animal Experimentation. While the chief interest in the toxic cerebral state centers in patients, it is planned nevertheless, to produce these conditions in laboratory animals and to carry out parallel studies on their body fluids. Both uremia and hepatic coma are readily produced in laboratory animals, such as dogs, rabbits, guinea pigs and rats by the surgical removal of the kidneys or liver, or through selective poisoning of these organs. A highly specific form of chemical damage to the liver can be achieved by injecting carbon tetrachloride into the portal vein and a highly selective form of renal damage can be produced by injecting HgCl<sub>2</sub> into the renal arteries. Laboratory animals also offer the best available means for the analysis of the cerebral effects of neurotoxic chemical compounds.

~~WARNING NOTICE~~  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

45-107

~~WARNING NOTICE~~  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

Part II

Program for the Chemical Synthesis of Neurotoxic Compounds.

It is planned to continue the synthesis of neurotoxic compounds in accordance with the previous leads and accomplishments disclosed by the work carried out during 1954

C and 1955. Four separate laboratories are engaged in this work. [redacted] in cooperation with [redacted] is continuing the synthesis of sulfur-containing organic compounds. These thiol compounds beside their curare-like effects also are effective agents B in influencing the autonomic nervous system. During the year 1955 the [redacted] B<sub>2</sub> at [redacted] under the direction of [redacted] has B cooperated in the pharmacological testing of these compounds. The [redacted] has found that the isothiuroniums exhibit inhibitory effects on both the sympathetic and parasympathetic ganglia and also potentiate epinephrine.

C [redacted] is continuing his work on the diphenolic and monophenolic B compounds at the [redacted]. In recent years the nitrogen group has been introduced by the Mannich reaction on the phenolic ring so that there is one carbon between the nitrogen and the ring structure. In 1956 it is proposed to intro- C duce the nitrogen directly on the ring by nitration. Some of [redacted] phenolic compounds produce definite auditory hallucinations and disturbance of taste and oral sensations. These effects are transitory and their duration is dependent on the dose of the drug. These compounds are of great clinical interest because of the scarcity of drugs in this field. The most potent compound in this group are derivatives of 4-chloro-3, 5 dimethyl phenol.

B [redacted] of the [redacted] has prepared numerous nitrogen derivatives of the hydrogenated quinolines. He also has succeeded in making similar derivatives of hydrogenated indol. These compounds prepared by C [redacted] are unique in that they produce pronounced curare action in animals, both by injection

and oral administration without the presence of the methonium group. These compounds (in suitable doses) have been used in a series of over 50 patients by both intramuscular and oral routes. At the low dosage level used they showed specific muscular relaxing effects on selective organs; some of them relax voluntary muscle while others show specific relaxing effect on the musculature of either the urinary tract or the gastrointestinal tract. The voluntary muscle relaxants have been used on patients with paralysis agitans and rheumatoid arthritis. Those which relax the smooth muscle of visceral organs have been used on patients with disturbed bladder function, with multiple sclerosis and prostatic hypertrophy.

(B) [REDACTED]

has continued to cooperate under a written agreement (previously arrived at) in synthesizing starting materials for [REDACTED]. They have supplied hydrogenated quinolines for [REDACTED] and nitrated some of the diphenolic compounds in cooperation with [REDACTED]. It is proposed to continue this cooperation.

42-174

**PROPOSED BUDGET**

1956 - 1957

Analysis of Body Fluids in Toxic States

Biochemists (2)	\$16,000.00	
Technicians, Laboratory (2)	6,000.00	
Special Equipment	10,000.00	
Supplies	8,000.00	
Clinical Assistant	<u>6,000.00</u>	\$46,000.00

Chemical Synthesis

C [REDACTED] Consultant	2,000.00	
C, B [REDACTED]	4,500.00	
C, B [REDACTED]	12,500.00	
C Chemical Supplies [REDACTED]	<u>6,000.00</u>	\$25,000.00

Toxicology and Pharmacology Laboratory

Animal caretaker and animals	12,000.00	
Pharmacologist and technician	12,000.00	
C [REDACTED] Toxicology	<u>5,000.00</u>	<u>\$29,000.00</u>

TOTAL		\$100,000.00
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**WARNING NOTICE**  
SENSITIVE INTELLIGENCE  
SOURCES AND METHODS INVOLVED

APPROVED  
DATE

45-125

31 January 1956

MEMORANDUM FOR: CONTROLLER  
ATTENTION: Finance Division  
SUBJECT: NEULRA, Subproject 45, Additional  
Authorization No. 4

Under the authority granted in the memorandum dated 13 April 1953, from the DGI to the DD/A and the extension of this authority in subsequent memoranda, Subproject 45 was previously approved. Under the same authority an additional sum of \$100,000.00 has been authorized to cover the subproject's expenses (thereby bringing to a total of \$133,000.00 funds obligated during FY 56), to be charged to Allotment 6-2502-10-002.

SIDNEY GOTTLIEB  
Chief  
TSS/Chemical Division

APPROVED FOR  
OBLIGATION OF FUNDS:

Research Director

No R 1433

Date:

Distribution:  
Orig & 2 - Addressee

- 1 - TSS/OC
- 1 - TSS/FASB
- 1 - TSS/SEB
- ✓ 2 - TSS/CD

(A) TSS/CD: (31 January 1956)

APPROVED  
DATE

RECEIPT

I hereby acknowledge receipt of the following checks:

(3)

Official Check #0209528 dated 22 Sept 55,  
in the amount of \$33,660.00,

(3)

Cashier's Check #091122 dated 22 Sept 55,  
in the amount of \$10,810.67,

(3)

Cashier's Check #091123, dated 22 Sep 55,  
in the amount of \$432.43,

(8)

all three payable to the [redacted]

[redacted]

(c)

Date: September 28, 1955

5747

45-127

16 September 1955

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : MULLERA Subproject A5, Invoice #3  
Allotment 5-2502-10-001 & 6-2502-10-001

1. Invoice #3 is attached covering the above subproject. This is a final invoice. It is requested that payment be made as follows:

(C)  
(B)

Cashier's check in the amount of \$33,667.00 drawn on a [redacted] and payable to the [redacted].

2. The check should be forwarded to Chief, TSS/Chemical Division, through TSS/Budget Officer, no later than 30 September 1955.

3. The three invoices covering this subproject aggregate \$100,000.00, and make use of the balance of the FY 55 funds plus the FY 56 funds obligated to date under this subproject. Since it is expected that additional FY 56 funds will be obligated under this subproject, the files on this project should not be closed.

SIMNEY GOTTLEB  
Chief  
TSS/Chemical Division

Attachments:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee  
1 - Comptroller  
1 - TSS/FASB  
2 - TSS/CD [redacted]

I CERTIFY THAT FUNDS ARE AVAILABLE:

OBIGATION REPORT NO. 323  
5-2502-10-001 667.00  
CHARGE TO ALLOTMENT NO. 6-2502-10-01 33,667.00

(A)  
TSS/CD (13 September 1955)

AUTHORIZING OFFICER  
CHECK # 41109528 THE AMOUNT OF \$33,667  
RECEIVED, 27 1955

(A)



8 August 1955

**MEMORANDUM FOR: COMPTROLLER**

**ATTENTION** : Finance Division  
**SUBJECT** : **MEINER**, Subproject 45, Additional Authorization No. 3

Under the authority granted in the memorandum dated 13 April 1953, from the DCI to the DC/A and the extension of this authority in subsequent memoranda, Subproject 45 was previously approved. Under the same authority an additional sum of \$33,000.00 has been authorized to cover the subproject's expenses (thereby bringing to a total of \$33,000.00 funds obligated during FY 56), to be charged to Allotment 6-2502-1D-001.

**APPROVED FOR  
OBLIGATION OF FUNDS:**

**SIDNEY GOTTLIEB**  
Chief  
TSS/Chemical Division

\_\_\_\_\_  
Research Director

*MOR 223*

Date:

**Distribution:**

- Orig & 2 - Addressee
- 1 - TSS/OC
- 1 - TSS/FAEB
- 1 - TSS/SBE
- ✓ 2 - TSS/CD

(A) ~~XXXXXXXXXX~~

~~XXXXXXXXXX~~

SUB. 7-45

RECEIPT

I hereby acknowledge receipt of the following:

Cashier's Check No. UPI3623 in the amount of \$33,000.00, dated July 8, 1955, drawn on the [redacted], payable to the [redacted]

(E)  
(B)

(B)(C)

Date: 7-19-55

45-130

RECEIPT

I hereby acknowledge receipt of the following:

(E) Cashier's Check No. 10113623 in the amount of \$33,000.00, dated July 8, 1955  
(B) drawn on the [redacted] payable to [redacted] the [redacted]

(C)

Date: July 13, 1955

131-41

MEMORANDUM RECEIPT

12 JUN 1955

DATE

TO:

FROM:

SUBJECT:

I hereby acknowledge receipt of the following:

- (A) [REDACTED] check # VM13623
- (B) payable to [REDACTED] in the amount of \$3,000.00
- (C) [REDACTED] invoice # 2 Suborg 1/5

(B) [REDACTED SIGNATURE]

Please return \_\_\_\_\_ signed copy(ies) of this receipt

SIGNATURE OF RECEIPIST

12 JUN 1955

DATE RECEIVED

To FORM NO. 34-48  
MAY 1950

~~SECRET~~

28 June 1955

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : Project NEULIRA, Subproject 45  
Invoice 2, Allotment 5-2522-10-001

1. Invoice 2 for Subproject 45 of Project NEULIRA is attached. Other invoices will follow later. It is requested that payment be made by cashier's check in the amount of \$33,000.00. The check should be drawn on [redacted] bank and made payable to the [redacted].

(E)  
(D)

2. Please send the check to Chief, TSS/Chemical Division through TSS/Budget Officer by 11 July 1955.

SIDNEY GOTTlieb  
Chief  
TSS/Chemical Division

Attachments:  
Invoice & Certifications

Distributions:  
Orig & 2 - Addresses  
1 - Comptroller  
1 - TSS/FASB  
2 - TSS/CD

(A) [redacted]

[redacted]

INVOICE 2

28 June 1953

For services

\$33,000.00

CERTIFICATIONS

(1) It is hereby certified that this is Invoice 2 applying to Subproject 45 of Project MULLERA, that performance is satisfactory, that the services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSS/CS, that this bill is just and correct and that payment thereof has not yet been made.

Date:

SIDNEY GOTTLIEB  
Chief, TSS/CS

(2) It is hereby certified that this invoice applies to Subproject 45 under Project MULLERA which was duly approved and that the project is being carried out in accordance with the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Date:

(A) Research Director

~~CONFIDENTIAL~~

23 May 1955

**MEMORANDUM FOR: THE CONTROLLER**  
**ATTENTION: Finance Division**  
**SUBJECT: Project NEUTRA, Subproject 45**

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, an additional \$27,000 of the over-all Project NEUTRA funds have been obligated to cover the subproject's expenses.

**SIDNEY GOSYLIE**  
Chief, TSS/Chemical Division

**APPROVED FOR OBLIGATION OF FUNDS:**

\_\_\_\_\_  
Research Director

Date: \_\_\_\_\_

Mo R-201

- Distribution:**  
Orig. & 2 - Addressee  
1 - TSS/OC  
1 - TSS/FASB  
1 - TSS/SRB  
2 - TSS/CD

(A) ~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

# 45

D.R.G.

CERTIFICATE

I hereby certify receipt of Cashier's Check No. MN191739, in the amount of \$33,333.00, drawn on the ~~\_\_\_\_\_~~ (E) ~~\_\_\_\_\_~~ (E) payable to the ~~\_\_\_\_\_~~ (E) ~~\_\_\_\_\_~~ (E)

Date: April 14 1955

MEMORANDUM RECEIPT

APR 23 1955  
DATE

TO:  
FROM:  
SUBJECT:

Sumner #1  
Assigned to

I hereby acknowledge receipt of the following:

(3) [REDACTED]

CHECK # 42287 IN THE AMOUNT OF \$52,233 RECEIVED.

[REDACTED]

(A)

[REDACTED]

Please return \_\_\_\_\_ signed copy(ies) of this receipt.

To Form No. 10-55  
MAY 1955

5-13-55



1 April 1955

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : Project MEHLER, Subproject No. 45  
Invoice #1, Allotment 5-2502-10-001

Invoice No. 1 for Subproject 45 of Project MEHLER is attached. Other invoices will follow later. It is requested that payment be made by cashiers check in the amount of \$33,333.00, payable to the [REDACTED]

B [REDACTED] The check should be sent to Chief, TSS/CD through TSS/Budget Officer by Wednesday, 6 April 1955. B

SIDNEY GOTTLIEB  
Chief  
TSS/Chemical Division

Attachments: (E)  
Invoice & Certifications [REDACTED]

Distributions:  
Orig & 2 - Addressee  
1 - Comptroller  
1 - TSS/FASB  
2 - TSS/CD

CHECK # 9137 IN THE AMOUNT OF \$33,337  
RECEIVED APR 13 1955

(A) [REDACTED]

(A) [REDACTED]  
THAT FUNDS ARE AVAILABLE  
5-2502-10-001  
4 APR 1955  
AUTHORIZING OFFICER [REDACTED]

45-139  
21 March 1955

**MEMORANDUM FOR: COMPTROLLER**  
**ATTENTION: Finance Division**  
**SUBJECT: Project KUHLEA, Subproject 45**

Under the authority granted in the Memorandum dated 13 April 1953 from the DOI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 45 has been approved, and \$40,000.00 of the over-all Project KUHLEA funds have been obligated to cover the subproject's expenses and should be charged to Allotment 5-2502-10-001.

SIMNEY GOTTLIEB  
Chief  
IES, Chemical Division

APPROVED FOR OBLIGATION  
OF FUNDS:

\_\_\_\_\_  
Research Director

Date: \_\_\_\_\_

Distribution:  
Orig & 2 - Addressee

- 1 - TSS/OC
- 1 - TSS/PASEB
- 1 - TSS/SRB
- ✓ 2 - TSS/CD

(A) \_\_\_\_\_

MOR-180

65-138

UNCLASSIFIED CONFIDENTIAL SECRET  
(SENDER WILL CIRCLE CLASSIFICATION TOP AND BOTTOM)

CENTRAL INTELLIGENCE AGENCY  
OFFICIAL ROUTING SLIP

TO	INITIALS	DATE
1 TSS/pc	[REDACTED]	11 Aug.
2 TSS/ed		
3		
4		
5		
FROM	INITIALS	DATE
1 TSS/cw	[REDACTED]	9/28
2		
3		

(A)

(A)

- APPROVAL
- INFORMATION
- SIGNATURE
- ACTION
- DIRECT REPLY
- RETURN
- COMMENT
- PREPARATION OF REPLY
- DISPATCH
- CONCURRENCE
- RECOMMENDATION
- FILE

Remarks:

SECRET CONFIDENTIAL UNCLASSIFIED



DRAFT  
21 March 1955

(A)

MEMORANDUM FOR: THE RECORD

SUBJECT : Project-MKULTRA, Subproject 45

(B)

1. The scope of this project is intended to encompass all those activities now engaged in by the [redacted], in its own facilities under the direction of TSS, Chemical Division. These activities will take the form of three lines of biochemical investigation; namely, the curare-like effect of certain thiols, the preparation of hydrogenated quinolines and indole alkaloids, and the continued study of diphenolic compounds. In addition to the above investigations, the present biological testing and assaying techniques will be elaborated and broadened to include cardiovascular and anticarcinogenic effects of compounds resulting from the above programs.

(B)

2. The attached proposal from [redacted] indicates the extent of the investigations that his facilities will allow him to carry out on the materials developed in the three lines of research referred to in paragraph 1, as well as certain other materials of interest to TSS/CD. [redacted] also serves as a general consultant to this Division and provides cover and cut-out facilities to the Agency.

(C)

(C)

3. The total cost of this project for a period of one year will not exceed \$100,000.00. At the present time, the sum of \$40,000.00 is being committed, the balance of the total to be committed at a later date.

4. [redacted] has been granted a TOP SECRET clearance by the Agency, and is fully capable of protecting the security of the Government's interest in this matter.

APPROVED FOR OBLIGATION  
OF FUNDS:



TSS, Chemical Division

APPROVED:



Research Director

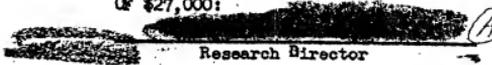


Chief, TSS/Chemical Division

Date: 24 Mar 55

APPROVED FOR ADDITIONAL APPROPRIATION  
OF \$27,000:

Attachments:  
Proposal



Research Director

Original Only.

Date: Mar 2-1955

[REDACTED]

[REDACTED]

APPROVED FOR ADDITIONAL APPROPRIATION OF \$33,000.00:

[REDACTED]

(A)

Research Director

Date:

AUG 10 1955

[REDACTED]

[REDACTED]

RESEARCH PROPOSAL [REDACTED] (B)

1955 - 1956

Three lines of biochemical investigation are proposed for 1955.

These are being pursued with [REDACTED] (C) as senior consultant, and the compounds are being prepared, as in 1954, by [REDACTED] (B) (C)

[REDACTED] (B) (C) at the [REDACTED] (B) and [REDACTED] (C) the [REDACTED] (B). The chief interest in [REDACTED] (C) work for 1955 will

be in the thiol compounds, some of which have carboxy groups, as well as amine groups, and some of which have either curare or soporic action.

[REDACTED] (C) will continue his work on the diphenolic compounds.

In this work the nitrogen for the first time will be placed directly on the ring. A wide variety of biological effects is found in these compounds. The work of [REDACTED] (C)

[REDACTED] (C) will center about the hydrogenated quinolines and the indole alkaloids.

Not only will the propanol linkage be used in the synthesis of these new compounds, but also the methyl propanol linkage and a linkage in which the carboxy group substitutes for the hydroxyl in the propanol.

Biological testing of these compounds will be more elaborate than previously and the assay techniques will be broadened to include work on the tracheal rings of the guinea pig, hyperthermia in rabbits, blood pressure and cardiovascular effects and anticarcinogenic effects.

[REDACTED]

6-13

**PROPOSED BUDGET FOR CHEMICAL SYNTHESIS**  
1955 - 1956

(C) [REDACTED]	Consultant chemist (fees and travel)	\$ 3,000.00
(C) [REDACTED]	(Budget partially supplied through the [REDACTED] as grant)	(B) 12,000.00
(C) [REDACTED]	(Budget partially supplied through the [REDACTED])	(B) 15,000.00
	Biochemist	10,000.00
	Synthetic starting materials [REDACTED]	(B) 12,500.00
	Laboratory Supplies	<u>7,500.00</u>
	Subtotal	60,000.00
	<b>Biological and Pharmacological Testing</b>	
	Clinical part-time assistants	8,000.00
	Pharmacological, technical	8,000.00
	Research Pharmacologist	8,000.00
	Animals and animal maintenance	3,000.00
	Tissue examinations	3,000.00
	Contribution to maintenance of [REDACTED]	(B) 10,000.00
	Total	\$ <u>100,000.00</u>

[REDACTED]

INVOICE CHECK LIST

NR0784 Subproject 45

Date of Original Authorization	Period Covered	Time Extended To	Allowment Number	Amount of Obligation
24 March 1959	1 year		5-2502-10-001	\$40,000.00

Additional Authorizations	Period Covered	Time Extended To	Allowment Number	Amount of Obligation
#8 6 June 1959			9-2502-15-908	3,760.00
#9 29 Dec. 1959			925-111-102	71,500.00
# 45 31 Mar 61	1 Feb 61 - 31 Sept 61		1115-110-7102	20,000.00
# 18	5 Oct 61		1025-1371-3112	20,000.00
# 12	8 Feb 62		2125-1370-2913-43	40,000.00

Invoice Number	Date	Amount	Balance
#13	5 Feb 59	\$35,750.00	\$35,750.00
Add. Auth. #8	5 Jun 59	3,760.00	39,510.00
#14	11 Oct 59	35,750.00	3,760.00
#15	21 August	3,760.00	0
add Auth. #9	29 Dec 59	71,500.00	71,500.00
#16	7 Jan 1960	23,833.00	47,667.00
#17	13 Dec 1960	23,833.00	23,834.00
#18	11 Aug 60	23,834.00	
# 79	31 Dec 61	20,000.00	20,000.00
REPT 20	3 Oct 61	20,500.00	40,000.00
21		40,000.00	

INVOICE CREDIT STATE

NSAID Subject 45

Date of Original Authorization	Period Covered	Time Extended to	Allotment Number	Amount of Obligation
24 JAN 55	1 year		5-2502-10-001	40000.00

Additional Authorizations	Period Covered	Time Extended to	Allotment Number	Amount of Obligation
25 May 55			5-2502-10-001	27000.00
8 Aug 55			6-2502-10-001	33000.00
30 Jan 56	1 year		6-2502-10-001	100000.00
10 Jan 57	1 year		7-2502-10-001	100000.00
21 Jan 58	1 year		8-2502-10-001	65200.00
27 Jan 59	1 year		9-2502-75-962	71500.00

Invoice No.	Date	Amount	Balance
1	1/1/55	33,333.00	6,667.00
2	4/1/55	33,000.00	667.00
3	9/1/55	33,667.00	0
4	2/1/56	33,000.00	67,000.00
5	5/1/56	33,000.00	34,000.00
6	10/1/56	34,000.00	0
7	25/1/57	31,333.33	16,666.66
8	3/1/57	33,333.33	34,333.33
9	12/1/57	33,333.33	
10	28/1/58	21,733.33	43,466.67
11	22/1/58	21,733.33	21,733.34
12	22/1/58	21,733.34	0

110  
 27,933.33  
 66,666.66  
 1/3 21,933.33  
 65,200.00  
 5  
 3  
 24  
 1/10

REMARKS: