



# THE BLACK VAULT

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**PROPOSAL**

It is proposed to continue research on problems critical to a clarification of the fundamental aspects of the stimulus-response relationship in biological systems. Studies will be conducted utilizing chronic animal preparations with permanent septal electrodes. Investigations will be conducted utilizing chronic electrode preparations coupled with selected classical types of conditioning. Studies will be conducted on the geography of the brain in selected species of animals to determine the locus in which stimulations will produce specific reactions.

A careful literature survey, especially of the Russian literature, of foreign research in this area will be conducted.

*106-1*

**Project: MKULTRA, Subproject 106**

**Date Initiated: January 1961**

**106 1**

**Date Expires: January 1962**

**Funds-current year: \$12,000.00**

**Purpose: To provide consulting service and Slavic language literature review of various foreign biological and psychological areas technology related to BW.**

**Status: The project is in its second year and is continuing to produce adequately.**

VOICE CHECK LIST

SEQUEL Subproject 106

106 2

At

Date of Original Authorization	Period Covered	Time Extended To	Allotment Number	Amount of Obligation
Jan. 20, 1960	1 yr.		0525-1009-470	\$ 21,855.00

Additional Authorizations	Period Covered	Time Extended To	Allotment Number	Amount of Obligation
# 2			1125-13903802	12,450.00

Invoice Number	Date	Amount	Balance
# 1	27 Jun '60	21,855.00	<del>0</del>
Auth # 2			12,450.00
# 2	23 Feb '61	12,450	<del>0</del>
Auth # 3	31 May 62	3,000.00	3,000.00
REMARKS:			

27 January 1960

## MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : MEULTRA, Subproject 106, Invoice #1  
Allotment 0525-1009-4902

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

B Cashier's check in the amount of \$841.00 payable  
to [REDACTED] drawn  
on a [REDACTED] Bank.

C  
B Cashier's check in the amount of \$21,014.00 payable  
to [REDACTED] drawn on  
a [REDACTED] Bank.

2. Please forward the checks to Chief, TSS/Chemical  
Division through TSS/Budget Officer by 10 February 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.

VA [REDACTED]  
Chief  
TSS/Chemical Division

Attachments:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee

1 - TSS/FASB  
2 - TSS/CD

~~SECRET~~

106 3

INVOICE

For Services

\$21,855.00

B



CERTIFICATIONS

(1) It is hereby certified that this is Invoice #1 applying to Subproject 106 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 filed 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 106 under 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: \_\_\_\_\_

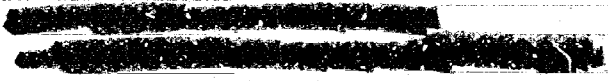
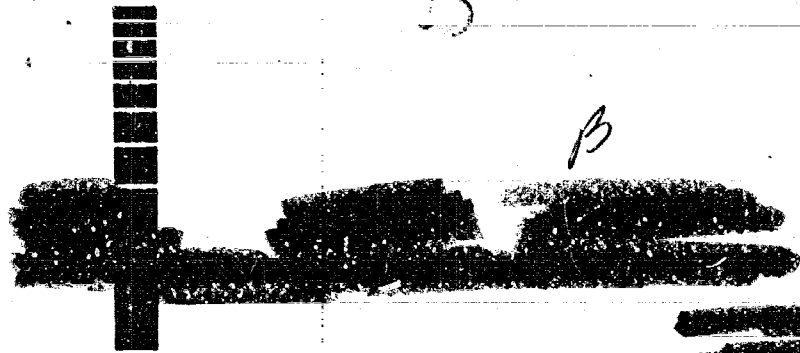
SECRET

106 3

PROPOSED BUDGET

Salary (Chief Investigator)	\$11,500
Technical Services	2,000
Materials and Supplies	3,000
Travel	2,500
Overhead (10.6%)	<u>2,014</u>
TOTAL	\$21,014

B

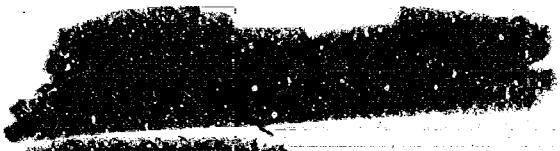


February 6, 1963.

P6

Response Relationships in Biological Systems  
Statement of Funds Received and Expended  
January 1, 1961 to December 31, 1961

<u>Grant Received</u>		\$12,000.00
<u>Expenditures:</u>		
Principal Investigator	\$9,000.00	
Laboratory supplies and expense	58.43	
Conference travel	727.18	
Consultants	800.00	
Overhead Burden	1,414.39	
Total Expenditures		12,000.00
Unexpended Funds, December 31, 1961		\$ -



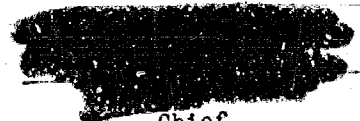
President

@



e

I have examined and approved the submitted expenditures.



Chief  
TSD/Biological Branch

H



2



*B*

Response Relationships in Biological Systems  
Statement of Funds Received and Expended  
February 15, 1960 to February 16, 1961

Grant Received:

\$21,014.00

Expenditures:Personnel:

Principal Investigator	\$ 9,000.00	
Laboratory Technician	975.00	
Secretary	<u>325.00</u>	\$ 10,500.00

Consumable Supplies:

Experimental Animals	1,600.00	
Disposal Cages	570.00	
Feed for Animals	375.00	
Laboratory Supplies	<u>800.00</u>	3,345.00

Travel:

Conference Travel	215.00	
Moving Expense, Principal Investigator	<u>2,375.00</u>	2,590.00

Consultants:

2,500.00

Overhead Burden2,079.00Total Expenditures:

\$21,014.00

Unexpended Funds, February 16, 1961

I have examined and approved the submitted expenditures.

*A*

Date: 2/16/61

Physiological Division

106

5

April 13, 1961


 *B*  
Gentlemen:

Thank you very much for the renewal of your grant in the amount of twelve thousand dollars (\$12,000.00) to run from January 1, 1961 for a period of twelve (12) months.

Herewith enclosed is our recapitulation of the funds received and the expenditures under the previous grant. We are sending you the original and one copy but will be happy to forward more copies if you so desire.

Very truly yours,

*e*   
Acting Treasurer

 *e*  
Enclosures/2

106 6

21 May 1962

MEMORANDUM FOR: THE RECORD

SUBJECT : MKULTRA, Subproject No. 106

1. It is proposed to continue research under MKULTRA subproject No. 106 on studies of biological systems with particular reference to quantifying the relationship between a stimulus and the biological-response to that stimulus. Problems arising from the difference in excitability and behavioral response among members of an animal population will be analyzed. By means of animal preparations particularly suitable for demonstrating specific functions, evaluations will be made of biological generalizations arising from the use of one species of animal as an experimental variable. A critical review will be maintained of selected foreign literature especially that on the neurophysiological mechanism of conditioning and related behavioral research.

2. Because of the very low level of effort on which this program is to be continued during the next year, reimbursements will be made directly to Mr. [REDACTED] the chief investigator, on the basis of his invoices for professional services rendered at the times that these

occur. No intervening cutouts will be required as were used in the previous program.

3. Funds required for this program for one year amount to \$3,000.00. Charges should be made against Allotment No. 2125-1390-3902.

4. It is not anticipated that any permanent equipment will be needed for this program.

5. The requirement for a semiannual informal accounting has been waived.

6. All personnel connected with the planning and monitoring of this program possess Agency Top Secret approval.

JA



Chief, TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:

JA



Chief, Technical Services Division

Date:

23 MAY 1963





Date: 21 May 1953

MEMORANDUM FOR: THE COMPTROLLER

ATTENTION : Finance Division

SUBJECT : MKULTRA, Subproject No. 106

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 106 has been approved, and \$1,000.00 of the over-all Project MKULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 2125-1390-3902.

*W*  
[Redacted]  
Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION  
OF FUNDS:

*W*  
[Redacted]  
[Redacted]  
Chief, Technical Services Division

Date: 23 MAY 1953

- Distribution:
- Original & 2 - Addressee
  - 1 - TSD/FASS ✓
  - 2 - TSD/RB
- [Redacted]

23 February 1961

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

SUBJECT : MUSLTRA, Subproject 106, Invoice #2  
Allotment 1125-1390-3902

1. Invoice No. 2 covering the above subproject is attached.  
Payment should be made as follows:

Cashier's check in the amount of \$480.00 payable  
to [redacted] drawn  
on [redacted]

Cashier's check in the amount of \$12,000.00 payable  
to [redacted] drawn on  
a [redacted]

2. Please forward the checks to Chief, TSD/Research  
Branch through TSD/Budget Officer by 9 March 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.

★ [redacted]  
Chief  
TSD/Research Branch

Attachments:  
Invoice & Certifications

Distributions:  
Orig & 2 - Addressee

1 - TSD/PASS  
2 - TSD/RB

CHECK # 2-022362  
RECEIVED... 15 MAR 1961

AMOUNT OF \$12000

147  
8 MAR 1961

★ [redacted]  
CHECK # 11024 IN THE AMOUNT OF \$480.00  
RECEIVED... 15 MAR 1961





23 February 1961

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

SUBJECT : MEXULTRA, Subproject 106, Invoice #2  
Allotment 1125-1390-3902

1. Invoice No. 2 covering the above subproject is attached.  
Payment should be made as follows:

B Cashier's check in the amount of \$180.00 payable  
E to [REDACTED] drawn  
on a [REDACTED] Bank.

P Cashier's check in the amount of \$12,000.00 payable  
E to [REDACTED] drawn on  
a [REDACTED] Bank.

2. Please forward the checks to Chief, TSD/Research  
Branch through TSD/Budget Officer by 9 March 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.

14 [REDACTED]  
Chief  
TSD/Research Branch

Attachments:  
Invoice & Certifications

Distributions:  
Orig & 2 - Addressee

Date: 21 May 1953

MEMORANDUM FOR: THE COMPTROLLER

ATTENTION : Finance Division

SUBJECT : MKULTRA, Subproject No. 104

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 104 has been approved, and \$1,000.00 of the over-all Project MKULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 2115-1390-3902.

A

[Redacted Signature]

Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION  
OF FUNDS:

~~XXXXXXXXXXXX~~  
Chief, Technical Services Division

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

Distribution:

Original & 2 - Addressee

1 - TSD/FASS

2 - TSD/RB ✓

[Redacted Stamp]

15 March 1961

[REDACTED] B

Gentlemen:

We are pleased to be able to transmit to you the following funds:

Cashier's Check No. [REDACTED] drawn on the [REDACTED] of [REDACTED] for \$480.00, dated 15 March 1961. E

Treasurer's Check No. [REDACTED] drawn on the [REDACTED] of the [REDACTED] for \$12,000.00, dated 15 March 1961. E

These funds represent a contribution for the use of your directors in carrying out the very worthwhile research goals of your organization.

Yours truly

Encl.  
Checks (2)

TO: TSS/OC

106 12

This is an invoice against previously obligated funds.

1. Date of Obligation: \_\_\_\_\_

2. Purpose of Project: Studies of

Neurophysiological Mechanisms

3. Progress to Date: \_\_\_\_\_

4. Expiration Date: One Year

5. Project Monitor: Dr. [Redacted] A

FROM: TSS/CD

[Redacted]

14 February 1961

## MEMORANDUM FOR: THE RECORD

SUBJECT: MKULTRA, Subproject No. 106

1. It is proposed to continue research under MKULTRA subproject No. 106 on studies of biological systems with particular reference to quantifying the relationship between a stimulus and the biological-response to that stimulus. Problems arising from the difference in excitability and behavioral response among members of an animal population will be analyzed. By means of animal preparations particularly suitable for demonstrating specific functions, evaluations will be made of biological generalizations arising from the use of one species of animal as an experimental variable. A critical review will be maintained of selected foreign literature especially that on the neurophysiological mechanism of conditioning and related behavioral research.

*out*  
2. The [redacted] will function as cut out and cover for this subproject. The necessary research will be conducted by [redacted] who will submit to the [redacted] summary accounting of funds at the conclusion of the program. Any unused funds remaining at the conclusion of the program will be returned to the [redacted] *11*

3. Funds required for this program for one year amount to \$12,000.00. (To this sum must be added \$480.00 representing \$ 3,000.00 a four per cent service charge to the [redacted] B making the total amount \$12,480.00.) Charges should be made against Allotment No. 1125-1390-3902.

4. It is not anticipated that any permanent equipment will be needed for this program. (It has been agreed that documentation and accounting for travel expenses which are reimbursable by B [redacted] shall conform to the accepted practice of that organization.)

5. The requirement for a semiannual informal accounting has been waived.

6. All personnel connected with the planning and monitoring of this program possess Agency Top Secret approval.

7. The project will be unclassified after it leaves the [redacted] B

APPROVED FOR OBLIGATION OF FUNDS:

APPROVED:

[redacted] A  
Research Director

[redacted] B  
Chief

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

TSD/Research Branch

Attachment:  
Proposed Budget /  
Distribution:  
Original Only [redacted]

**PROPOSED BUDGET**

**SALARY:**

Chief Investigator.....	\$10,000.00
TRAVEL.....	1,000.00
INSURANCE; HOSPITALIZATION; SOCIAL SECURITY.....	300.00
ADMINISTRATIVE EXPENSES .....	700.00
<b>TOTAL</b>	<b><u>\$12,000.00</u></b>





14 February 1961

MEMORANDUM FOR: COMPTROLLER  
ATTENTION : Finance Division  
SUBJECT : MKULTRA, Subproject 106

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 106 has been approved and \$12,480.00 of the over-all MKULTRA project funds has been obligated to cover the subproject expenses. This obligation of funds should be charged to Allotment 1125-1390-3902.

[Redacted]  
Chief  
TSD/Research Branch

1627

APPROVED FOR OBLIGATION OF FUNDS:

A

[Redacted]  
Research Director

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

Distribution:

Orig. & 2 - Addressee

- 1 - TSD/OC
- 1 - TSD/FASS
- 2 - TSD/RB

TSD/CR/ [Redacted] 14 Feb 1961

23 February 1961

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

SUBJECT : IKULTRA, Subproject 106, Invoice #2  
Allotment 1125-1390-3902

1. Invoice No. 2 covering the above subproject is attached.  
Payment should be made as follows:

*B*  
Cashier's check in the amount of \$480.00 payable  
to [redacted] drawn  
on a [redacted] bank.

*B*  
Cashier's check in the amount of \$12,000.00 payable  
to [redacted] drawn on  
a [redacted] bank.

2. Please forward the checks to Chief, TSD/Research  
Branch through TSD/Budget Officer by 9 March 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.

*JA* [redacted]  
Chief  
TSD/Research Branch

Attachments:  
Invoice & Certifications

Distributions:  
Orig & 2 - Addressee

- 1 - TSD/FASS
- 2 - TSD/RB



INVOICE

106 15

For Services

\$12,480.00

16 [REDACTED]

CERTIFICATIONS

(1) It is hereby certified that this is Invoice # applying to sub-project No. 106 of MARIANA, 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 RD/RB, that this bill is just and correct and that payment thereof has not yet been made.

Chief, RD/Research Branch

Date: 23 February 1961

(2) It is hereby certified that this invoice applies to SubProject 106 of MARIANA 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 RD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date:

[REDACTED]

14 February 1961

MEMORANDUM FOR: COMPTROLLER

ATTENTION : Finance Division

SUBJECT : MKULTRA, Subproject 106

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 106 has been approved and \$12,480.00 of the over-all MKULTRA project funds has been obligated to cover the subproject expenses. This obligation of funds should be charged to Allotment 1125-1390-3902.

A [Redacted] Chief  
TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:

Research Director

Date:

Distribution:

Orig. & 2 - Addressee

1 - TSD/OC

1 - TSD/FASS

2 - TSD/RB

TSD/OC [Redacted]



29 December 1959

MEMORANDUM FOR: COMPTROLLER  
ATTENTION : Finance Division  
SUBJECT : MKULTRA, Subproject 106

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 106 has been approved and \$21,855.00 of the over-all MKULTRA project funds has been obligated to cover the subproject expenses. This obligation of funds should be charged to Allotment 0525-1009-4902.

A

[Redacted]

Chief  
TSS/Chemical Division

APPROVED FOR OBLIGATION  
OF FUNDS:

[Redacted Signature]

Research Director

I CERTIFY THAT FUNDS ARE AVAILABLE  
OBLIGATION REFERENCE NO. 1448  
CHARGE TO ALLOTMENT NO. 0525-1009-4902  
[Redacted]

Date: 20 JAN 1960

Distribution:  
Orig & 2 - Addressee

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

TSS/CD [Redacted] (29 Dec '59)

[Redacted]

**CONFIDENTIAL FUNDS POSTING VOUCHER**

106 78 901

VOUCHER NO. 7-12				DATE 2-6				VOUCHER NO. 7-12				
DESCRIPTION-ALL OTHER ACCOUNTS 13-33		34-39 STATION CODE	40-42 EXPEND CODE	43 F U N D S	45-46 PAY PER. LIG. CODE	47-52 OBLIG. REF. NO. ADVANCE ACCT. NO. EMP. NO.	53 CA YR	54-57 GENERAL LEDGER ACCT. NO.	58-67 ALLOT. OR COST ACCT. NO.	68-70 DUE DATE	71-80 AMOUNT	
DESCRIPTION- ADVANCE ACCOUNTS 13-27		25-33 P.O. NO.	34-39 PROP. NO.	40-42 PROJECT NO.					62-67 CR. NO. X REF. NO.	OBJECT CLASS	DEBIT	CREDIT
SUB 106 INY 1				880	5	001448	6010	251009	1902	179	2195500	
MILITARY												84100
INDUSTRIA												2101400
EXPLANATION OF ENTRY										TOTALS		
<i>see attached</i>												
DATE	PREPARED BY	DATE	REVIEWED BY	CERTIFIED FOR PAYMENT OR CREDIT								
1				DATE	SIGNATURE OF							
				2/6/60								

106 19

27 January 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSS/Budget Officer

SUBJECT : MKUI/TRA, Subproject 106, Invoice #1  
Allotment 0525-1009-4902

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

*B*  
*C* Cashier's check in the amount of \$841.00 payable to [redacted] drawn on [redacted] Bank.

*B*  
*C* Cashier's check in the amount of \$21,014.00 payable to [redacted] drawn on [redacted] Bank.

2. Please forward the checks to Chief, TSS/Chemical Division through TSS/Budget Officer by 10 February 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* [redacted]  
Chief  
TSS/Chemical Division

Attachments:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee

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

I CERTIFY THAT FUNDS ARE AVAILABLE  
OBLIGATION NUMBER: 1441  
CHARGE TO ALLIANCE NO. 0525-1009-4902  
ASTIC, LEON GIERER

28 JAN 1960

*E*  
CHECK # 246679  
REISSUE

*E*  
CHECK # 246680  
REISSUE

SECRET

2/4/60

2/4/60



[REDACTED]

TO: TSS/OC

1. Date of Obligation: \_\_\_\_\_

2. Purpose of Project: Studies of  
Neurophysiological Mechanisms

3. Progress to Date: \_\_\_\_\_

4. Expiration Date: One year

5. Project Monitor: Dr. [REDACTED] *A*

FROM: TSS/CD *H*

Room B-10, [REDACTED], Ext. 8612

[REDACTED]

106 20

February 5, 1960

[REDACTED] B

Gentlemen:

We are pleased to be able to transmit to you the following funds:

Treasurer's Check <sup>C</sup> drawn on the <sup>E</sup> [REDACTED] for \$841.00, dated 2 Feb. 1960.

Treasurer's Check <sup>E</sup> drawn on the <sup>E</sup> [REDACTED] for \$21,014.00, dated 2 Feb. 1960.

<sup>C</sup> These funds represent a contribution for the use of your directors in carrying out the very worthwhile research goals of your organization.

Yours truly,

Encl.  
Checks (2)

29 December 1959

**MEMORANDUM FOR: COMPTROLLER**

**ATTENTION : Finance Division**

**SUBJECT : MKULTRA, Subproject 106**

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 106 has been approved and \$21,855.00 of the over-all MKULTRA project funds has been obligated to cover the subproject expenses. This obligation of funds should be charged to Allotment 0525-1609-4902.

A

**Chief  
TSS/Chemical Division**

**APPROVED FOR OBLIGATION  
OF FUNDS:**

**Research Director**

**Date:**

**Distribution:  
Orig & 2 - Addressee**

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

TSS/CD/ (29 Dec '59)

[REDACTED]

DRAFT

29 December 1959

106 21

MEMORANDUM FOR: THE RECORD

SUBJECT : MKULTRA, Subproject 106

1. The purpose of MKULTRA subproject 106 is to undertake studies on biological systems with particular reference to quantifying the relationship between a stimulus and the biological response to that stimulus. The lack of a general understanding and adequate methodology for handling this relationship in a realistic fashion is one of the major roadblocks to rapid technical progress in the fields of assessment and control of behavior at the present time. It is planned to utilize an interdisciplinary approach in this research with emphasis on the side of the physical sciences. Several advanced mathematical techniques and physical models have been suggested as fruitful research areas not presently being exploited. Problems arising from the difference in excitability and behavioral response among members of an animal population will be analyzed. An attempt will be made to elucidate relationships between lower animals and man by comparing physiological, biochemical, and behavioral characteristics. By means of animal preparations particularly suitable for demonstrating specific functions evaluations will be made of biological

[REDACTED]

generalizations arising from the use of one kind of animal as an experimental variable. A critical review will be made of selected foreign literature especially that on the neurophysiological mechanism of conditioning and related behavioral research. Particular reference will be made to the recent shift on the part of the Russians from the strict "Pavlovian" view to a more realistic approach to the problem.

2. The [redacted] will function as cut out and cover for this subproject. The necessary research will be conducted by [redacted], who will submit to the [redacted] a summary accounting of funds at the conclusion of the program. Any unused funds remaining at the conclusion of the program will be returned to the [redacted]

3. Funds required for this program for one year amount to \$21,014.00. To this sum must be added \$841.00 representing a four per cent service charge to the [redacted] making the total amount \$21,855.00. Charges should be made against Allotment No. 0525-1009-4902.

4. It is not anticipated that any permanent equipment will be needed for this program. It has been agreed that documentation and accounting for travel expenses which are reimbursable by

B

[redacted]  
106-2

PROPOSAL

106 22

It is proposed to mount the initial phases of a program aimed at an eventual clarification of the fundamental aspects of the problem of stimulus - response relationship in biological systems. The present theoretical models and concepts in this area are not only inadequate but also represent roadblocks to further progress in the evaluation and control of biological systems, including man. (See work such as Loewe, S. Science, 130, pg 692, 1959) The development of practical tools for this work in the form of chronic animal preparations with permanent septal electrodes has lately opened the door to effective research in this area.

Initially the work will consist of a careful literature survey, especially of the Russian literature, coupled with various classical types of conditioning experiments using the chronic electrode preparations available from animal guidance programs. Later, the results of these experiments will be pooled with those involving standard drug effects on the same preparations to design critical experiments aimed at providing new abstract models for these phenomena.

It is planned that during the first year one investigation<sup>or</sup> can complete the literature work and with a minimum of help carry out the initial animal studies required for the design of several definitive experiments to be carried out during the second year. The form of these experiments cannot presently be visualized because of the inadequacies of present knowledge.

106-1