

1082

714714

September 29, 1959

L. D. MacKay, Director
Finance Division

Herman M. Roth, Director
Research and Development Division

H.M.R.
10/1/59

CONTRACT NO. AT-(40-1)-1975 - MEDICAL COLLEGE OF GEORGIA

SYMBOL: ORS:JDB

This is to advise you that work under Contract No. AT-(40-1)-1975 with the Medical College of Georgia has been completed and that an acceptable final report has been submitted. Therefore, the obligations of the Medical College of Georgia have been concluded and the contract should be closed out.

H.M.R.
Herman M. Roth

CC: J. R. Moore ✓
F. E. McPherson

REPOSITORY Oak Ridge Operations
COLLECTION Records Holding Area
Documents 1944-94
BOX No. Contracts AT-(40-1)-1966-1977
1st Bldg. 2714-H
FOLDER Contract Correspondence
Contract # AT-(40-1)-1975

1097910

Modification 3 to Contract AT-(40-1)-1975

Medical College of Georgia

Distributed: December 13, 1957

Distribution

washington

Contract Files (2)

Finance

Research & Development (2)

Extra Copies

washington (B & M) (2)

1097911

ACC:ARB

Oak Ridge, Tennessee
December 13, 1957

Medical College of Georgia
Department of Physiology
Augusta, Georgia

Attention: Dr. W. F. Hamilton

Subject: MODIFICATION NO. 3 TO CONTRACT NO. AT-(40-1)-1975

Gentlemen:

Enclosed, for your retention, is one duly signed copy of
Modification No. 3 to your Contract No. AT-(40-1)-1975.

Very truly yours,

[Signature]
John R. Moore

John R. Moore
Director, Contract Division
Oak Ridge Operations

[Signature]
Enclosure:
Mod. 3

OFFICE ▶	Contract Div.	Actg Director Contract Div.			
SURNAME ▶	Brown:arb	<i>[Signature]</i> RCHumphries			
DATE ▶	12-13-57	12-13-57			

1097912

ACC:ARB

Oak Ridge, Tennessee
December 4, 1957

Medical College of Georgia
Departments of Physiology, Radiology,
Medicine and Thoracic Surgery
Augusta, Georgia

Attention: Dr. W. F. Hamilton

Subject: MODIFICATION NO. 3 TO CONTRACT NO. AT-(40-1)-1975

Gentlemen:

Enclosed, in triplicate, is proposed Modification No. 3 to the subject contract which provides for additional time, to December 31, 1958, for completion of the work under the contract, without additional funds.

If the modification, as submitted, is satisfactory to you, will you please sign two of the enclosed copies in the space provided for the Senior Investigator, have such two copies signed by the proper official of the College and return them to this office. After signature on behalf of the Commission, one duly signed copy of the modification will be returned for your retention.

Very truly yours,

R. E. Moore
John R. Moore
Director, Contract Division
Oak Ridge Operations

Enclosure: *7 FF*
Proposed Mod. 3 (in trip.)

OK BCC: Div. of Biology & Medicine, Washington
C. S. Shoup

OFFICE ▶	Contract Div. Contract Div.	Actg. Director		
SURNAME ▶	<i>Brown:arb</i>	<i>RCHumphries</i>		
DATE ▶	12-4-57	12-4-57		

1097913

J. W. Ould, Jr., Assistant General Counsel

November 7, 1957

John E. Moore, Director, Contract Division

REQUEST FOR PREPARATION OF MODIFICATION TO CONTRACT AT-(40-1)-1975
MEDICAL COLLEGE OF GEORGIA

SYMBOL: ACC:ESH

Mod. 3

Please prepare an appropriate modification to the subject contract to provide for additional research, completion of which will be not later than December 31, 1958, without additional funds.

A Request for Contract Action is enclosed for your use.

John R. Moore

✓
enclosures:

1. Request for Cont. action
2. Memo from Haggerty to Keth dtd 10-17-57
3. Cy ltr. from Sawyer to Shoup dtd 10-21-57
4. Cy application for extension of Grant

cc: C. S. Shoup
CK A. Brown w/cy encls. 1 & 2

Actg. Director					
OFFICE ▶	Contract Div.				
SURNAME ▶	<i>Humphries</i>				
DATE ▶	11-7-57				

1097914

MEDICAL COLLEGE OF GEORGIA



OFFICE OF THE PRESIDENT

AUGUSTA, GEORGIA

February 1-, 1957

Mr. John R. Moore,
Director, Contract Division,
Oak Ridge Operations,
U. S. Atomic Energy Commission,
Oak Ridge, Tennessee.

Dear Mr. Moore:

Please accept my thanks for the signed copy of notification
No. 2 to Contract No. DA-36-011-AMC-1077, which was received at this
office for our files.

Sincerely yours,

R. M. Pugh
R. M. Pugh, M.D.,
President.

1097915

In Reply
Refer To: ACC:ARB

Oak Ridge, Tennessee
February 6, 1957

Medical College of Georgia
Office of the President
Augusta, Georgia

Attention: Dr. Edgar R. Pund, President

Subject: MODIFICATION NO. 2 TO CONTRACT NO. AT-(40-1)-1975

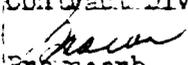
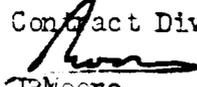
Gentlemen:

Enclosed, for your retention, you will find one duly signed copy of
Modification No. 2 to your Contract No. AT-(40-1)-1975.

Very truly yours,

John R. Moore
Director, Contract Division
Oak Ridge Operations


Enclosure:
Mod. 2

Contract Div.	Director Contract Div.				
					
Erben:arb	JRM:moore				
2-6-57	2-6-57				

1097916

Modification 2 to Contract AT-(40-1)-1975

Medical College of Georgia

Distributed: February 6, 1957

Distribution

Washington

Contract Files (2)

Finance

Research & Development (2)

Washington (B & M) (2)

Extra Copies

1097917

MEDICAL COLLEGE OF GEORGIA



OFFICE OF THE PRESIDENT

AUGUSTA, GEORGIA

January 26, 1957

ACC:ARB

Mr. John K. Moore,
Director, Contract Division,
Oak Ridge Operations,
Oak Ridge, Tennessee.

Dear Mr. Moore:

In compliance with your instructions of January 23,
I am inclosing two copies of the proposed Modification No. 2
forms and the Notice of Research Project with reference to
contract no. AT-(4-1)-1075.

Very truly yours,

Edgar R. Pond, M. D.,
President.

BT Incls.

cc: Dr. W. F. Hamilton, Senior Investigator.
Dr. Thomas N. Dwyer, Comptroller.

1097918

In Reply
Refer To: ACC:ARB

Oak Ridge, Tennessee
January 23, 1957

Medical College of Georgia
Departments of Physiology, Radiology,
Medicine and Therasis Surgery
Augusta, Georgia

Attention: Dr. W. F. Hamilton

Subject: MODIFICATION NO. 2 TO CONTRACT NO. AT-(40-1)-1975

Gentlemen:

Enclosed, in triplicats, is proposed Modification No. 2 to the subject contract which provides the program and budget for the third period of performance beginning January 1, 1957 and ending December 31, 1957. Also enclosed is a Notice of Research Project form which is to be used in submitting your summary statement.

If the modification, as submitted, is satisfactory to you, it is requested that you sign two of the enclosed copies in the space provided for the Senior Investigator and have such two copies signed by the proper official of the University, returning both copies to this office. The third copy is for your retention. The summary statement, with the date of submittal shown thereon, should be returned along with the signed copies of the modification. After signature on behalf of the Commission, one duly signed copy of the modification will be returned for your retention.

Very truly yours,

Stated by R. L. Eubank, *acting*

John R. Moore
Director, Contract Division
Oak Ridge Operations

W.F.H.
Enclosures:

1. Proposed Mod. 2 (in trip.)
2. Notice of Research Project Form

CC: <i>C. S. Sheop</i>	Director			
OFFICE ▶ Contract Div.	Contract Div.			
SURNAME ▶ <i>Brown:arb</i>	<i>JRM:ore</i>			
DATE ▶ 1-23-57	1-23-57			

1097919

J. W. Guld, Jr., Assistant General Counsel

January 9, 1957

John R. Moore, Director, Contract Division

REQUEST FOR MODIFICATION TO CONTRACT AT-(40-1)-1975 WITH MEDICAL COLLEGE OF GEORGIA, AUGUSTA, GEORGIA

SYMBOL: ACC:DS

Please prepare an appropriate modification to subject contract to extend the period to December 31, 1957, with new funds in the amount of \$2,857.00, in accord with the attached program and budget.

Request for contract action from the Research and Development Division is enclosed for your use.

MOORE

John R. Moore

Enclosures:

1. Reqt for Cont. Action
2. Budget breakdown
3. Program resume'
4. Memo in wash. 12/7 fm Div. of Biology & Medicine
5. Proposal for Renewal

cc: C. S. Shoup
 L. D. Mackay
 Alice Brown, w/cy encls 1, 2 & 4

OFFICE ▶	Cont. Div.	Dep. Dir. Cont. Div.	Director Contract Div.			
SURNAME ▶	D. Smith	R. G. Humphries	J. R. Moore			
DATE ▶	1/9/57	1/9/57	1/9/57			

1097920

In Reply Refer To:
ADC:JN

Oak Ridge, Tennessee
March 5, 1956

Medical College of Georgia
Department of Physiology
Augusta, Georgia

Attention: Dr. W. P. Hamilton

Subject: MODIFICATION NO. 1 TO CONTRACT NO. AT-(40-1)-1975

Gentlemen:

Enclosed, for your retention, you will find one duly signed
copy of Modification No. 1 to your Contract No. AT-(40-1)-
1975.

Very truly yours,

John P. Moore
Director
Contract Division
Oak Ridge Operations


Enclosure:
Mod. 1

		Director							
OFFICE ▶	Cont. Coord. Br.	Cont. Div.							
SURNAME ▶	Nicholson:jn	Moore							
DATE ▶	3-5-56	3-5-56							

1097921

Mod. 1 to Cont. AT-(40-1)-1975

Medical College of Georgia

Distributed March 2, 1956

Washington

Cont. files (2)

Finance

Res. & Development (2)

Washington (B&M-2)

extra copies

1097922

In Reply Refer To:
ADC:JN

Oak Ridge, Tennessee
February 16, 1956

Medical College of Georgia
Department of Physiology
Augusta, Georgia

Attention: Dr. W. F. Hamilton

Subject: MODIFICATION NO. 1 TO CONTRACT NO. AT-(40-1)-1975

Gentlemen:

Enclosed, in triplicate, is proposed Modification No. 1 to the subject contract which provides the program and budget for the second period of performance beginning January 1, 1956 and ending December 31, 1956. Also enclosed is a Notice of Research Project form which is to be used in submitting your summary statement.

If the modification, as submitted, is satisfactory to you it is requested that you sign two of the enclosed copies in the space provided for the Senior Investigator and have the copies signed by the proper official of the College, returning both copies to this office. The summary statement should be returned along with the signed copies of the modification. After signature on behalf of the Commission, one duly signed copy of the modification will be returned for your retention.

Very truly yours,

John R. Moore
Director, Contract Division
Oak Ridge Operations

JRF
Enclosures:
Mod. 1 (in trip.)
Res. Project form

CC: Dr. Shoup

OFFICE ▶	Cont. Coord. Br.	Cont. Div.				
SURNAME ▶	<i>Nicholson</i> Nicholson:jn	<i>Moore</i> Moore				
DATE ▶	2-16-56	2-16-56				

1097923

Contract AT-(10-1)-1975

Medical College of Georgia

Distributed February 11, 1955

Washington

Contract files (2)

Finance (2)

Research & Medicine (2)

Washington (BAM-2)

extra copies

1097924

In Reply Refer To:
ADC:JW

Oak Ridge, Tennessee
February 14, 1955

Medical College of Georgia
Department of Physiology
Augusta, Georgia

Attention: Dr. W. F. Hamilton

Subject: CONTRACT NO. AT-(40-1)-1975

Gentlemen:

Enclosed, for your retention, you will find two duly signed
copies of Contract No. AT-(40-1)-1975.

Very truly yours,

John R. Moore
Director
Contract Division
Oak Ridge Operations

v jff
Enclosure:
Contract (in dup.)

Nicholson: jn

OFFICE ▶						
SURNAME ▶	<i>Nicholson</i>	<i>Moore</i>				
DATE ▶	<i>2.14-55</i>	<i>FEB 14 1955</i>				

1097925

In Reply Refer To:
ADC:JN

Oak Ridge, Tennessee
January 27, 1955

Medical College of Georgia
Department of Physiology
Augusta, Georgia

Attention: Dr. W. F. Hamilton

Subject: CONTRACT NO. AT-(40-1)-1975

Gentlemen:

Your research project which was submitted to the Commission's Division of Biology and Medicine, Washington, D. C., has been approved by that office in the amount of \$2,857.00 and has been forwarded to this office for preparation of an appropriate contract covering the Commission's support of your project.

Enclosed, in triplicate, is a contract numbered as shown in the subject line above, which incorporates in Appendix "A" a description of your project and the budget for the first period which you are to follow as a general guide. Also enclosed is a Notice of Research Project form which is to be used in submitting your summary statement.

It is requested that you sign each copy of the contract in the space provided for the Senior Investigator and have the copies signed by the proper official of the College, returning two copies to this office. The summary statement should be filled in and returned along with the signed copies of the contract. After signature on behalf of the Commission, one duly signed copy of the contract will be returned for your retention.

It will be noted that the contract provides for payment in Article III of a lump sum in consideration of your performance of the research activities described in Appendix "A". The first payment, representing 45 per cent of the amount of the agreed compensation, will be paid to you upon your submission of a properly certified voucher on or before the first date established in Article II of the contract. Another 45 per cent of the agreed compensation will be paid to you within six months from the date of the first payment. The remaining 10 per cent of the agreed compensation will be paid to you upon receipt and

OFFICE > acceptance of a satisfactory progress report or the final report as
the case may be.

1097926

January 27, 1955

In order to assist you in preparing an appropriate voucher there is enclosed an instruction sheet containing numbered instructions corresponding with numbers appearing on a specimen copy of the voucher form. Vouchers should be submitted to the Research and Medicine Division, Oak Ridge Operations Office, U. S. Atomic Energy Commission, Post Office Box E, Oak Ridge, Tennessee in one original (white) and four copies (yellow). It is assumed that you will give your business office the benefit of these instructions.

Your attention is called to the reporting requirements outlined in Appendix "C" to the contract, especially to Item No. 3 requiring the immediate submission of a 200 word summary statement describing the purpose and scope of your project.

For your information and guidance in purchasing isotopes through the Commission, in accordance with the provisions of Article VI, there is enclosed a copy of the latest Procurement Procedures for Radioisotopes together with a set of application forms, which you will use in making purchases of isotopes.

Your particular attention is invited to Appendix "B", Section 12 - Fellowships.

It is believed that the remaining portions of the contract are self-explanatory, however, if you have any questions concerning the application or interpretation of any of the contract provisions, I will be glad to furnish you with additional information.

Very truly yours,

R. G. Humphries
Acting Director
Contract Division
Oak Ridge Operations

- ✓ *WKF*
- Enclosures:
- Contract (in trip.)
- Notice of Research Project
- Vouchers & Instr. Sheets
- Procurement Procedures for Radioisotopes

Nicholson:ja
CC: Div. of Biology & Medicine, Washington
CK Dr. Shoup *Acting Director*

OFFICE	<i>Cont. Division</i>			
SURNAME	<i>Nicholson</i>	<i>Humphries</i>		
DATE	<i>1-27-55</i>	<i>1-27-55</i>		

1097927

Office Memorandum • UNITED STATES GOVERNMENT

TO : J. W. Ould, Jr., Assistant General Counsel DATE: November 7, 1957

FROM : John R. Moore, Director, Contract Division

SUBJECT: REQUEST FOR PREPARATION OF MODIFICATION TO CONTRACT AT-(LC-1)-1975
MEDICAL COLLEGE OF GEORGIA

SYMBOL: ACC:BSH

Please prepare an appropriate modification to the subject contract to provide for additional research, completion of which will be not later than December 31, 1958, without additional funds.

A Request for Contract Action is enclosed for your use.


John R. Moore

Enclosures:

1. Request for Cont. Action
2. Memo from Hagerty to Roth dtd 10-17-57
3. Cy ltr. from Weyer to Shoup dtd 10-22-57
4. Cy application for extension of Grant

CC: C. S. Shoup
A. Brown w/cy encls. 1 & 2

1. TO: J. A. Moore Chairman Contract Board. From: Res. & Dev. Div.

It is requested that the Contract Board take the necessary action to process the following described contract action in accordance with the provisions of Bulletin OR-O&M-19:

2. Nature of Action Requested

Selection of New Contractor and Negotiation of Contract.

Modification of Contract
 No. AT-(40-1)-1975
 Contractor: Medical College of Georgia
Augusta, Georgia

Review and approval of Contract, Sub-contract or Purchase Order.
 Number: _____
 Name: _____

Other (Explain) _____

3. Nature of Services to be Covered by Contract

Construction Architect-Engineer Other (Explain) Research

4. Funding Amount to be Obligated by this Contract Action \$ None

Source of Funds

~~Approved ORO Financial Plan, _____ Quarter, Fiscal Year 19____
 Project No. _____ or, Activity No. _____
 Funds to be Obligated: Allotment No. _____ (F.Y. 19____ Funds)
 Procurement Directive No. _____ Dated _____
 Issuing Office _____~~

Concurrence in Funding Statement: (signed) Asmiller
 Chief, Budget Branch

5. Project or Activity to be Covered by Contract Action:

Location of Work: _____ Construction Directive No. _____
 Estimated Cost of Work to be Covered by this Contract Action \$ _____
 Schedule: Date Work to Start _____ Estimated Completion Date _____
 Description of Project or Activity:

(If more space is required use separate sheets and attach hereto:)

<p>6. Contract Board Docket No. _____ (To be assigned by Board Secretary)</p>	<p>7. Request Submitted By: (signed) _____ Date: <u>NOV 1</u> 1957 Title: <u>C. S. Shoup</u> C. S. SHOUP CHIEF, BIOLOGY BRANCH RESEARCH AND DEVELOPMENT DIVISION</p>
<p>8. Complete Description of Services to be Furnished by Contractor: headquarters designated research contract TITLE: "Investigation of the Results of Treating Crippling Emphysema with I-131" (If more space is required use separate sheets and attach hereto:)</p>	
<p>9. Description of other changes to be covered by Modification: Modify contract to extend the period during which the work may be performed to December 31, 1958, without additional funds. (If more space is required use separate sheets and attach hereto:)</p>	
<p>10. <u>Negotiated Contracts.</u> (Show why it appears desirable to negotiate new contract or to negotiate modification to existing contract) Memorandum from J. F. Haggerty to Herman M. Roth dated 10-17-57. (If more space is required use separate sheets and attach hereto:)</p>	
<p>11. <u>Contracts, Subcontracts, or Purchase Orders Submitted for Review and Approval:</u> (Furnish brief descrip- tion of action in this space and attach pertinent documents) None</p>	
<p>12. <u>Disputes:</u> Attach a statement summarizing the dispute together with pertinent documents and Background Material. None</p>	

1097931
 11/1/57

1018

1097931

Office Memorandum • UNITED STATES GOVERNMENT

TO : Herman Roth, Director, Research and
Development Division, Oak Ridge Operations Office

DATE: October 17, 1957

FROM : James F. Haggerty, Medical Branch
Division of Biology and Medicine, Washington

SUBJECT: RENEWAL OF CONTRACT NO. AT(40-1)1975 - MEDICAL COLLEGE OF GEORGIA

SYMBOL: BMM:JFH

Attention: Dr. C. S. Shoup

Reference is made to your memorandum of October 4, 1957, addressed to this office. It is the recommendation of this Division that your office extend the subject contract without additional funds for a period of one year, with a terminal date of December 31, 1958.

CONTRACTS - 1975 (med coll of Ga)

MEDICAL COLLEGE OF GEORGIA



LEWIS T. H. MUDGE MEMORIAL HOSPITAL

ALBANY, GEORGIA

OFFICE OF COMPTROLLER

October 21, 1957

Mr. C. S. Shoup
Chief, Biology Branch
Research and Development Division
U. S. Atomic Energy Commission
Oak Ridge, Tennessee

Dear Mr. Shoup:

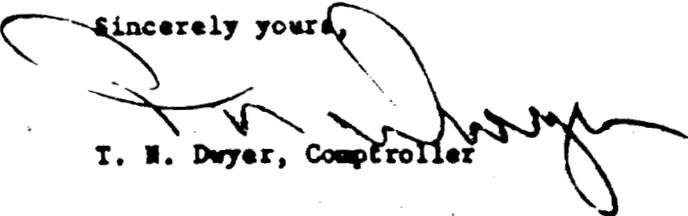
Subject: Contract No. AT-(40-1)-1975

The funds now in our possession will be sufficient to provide funding for the proposed performance of the above grant.

The project to date, the current year, reflects costs of \$30.00. The estimate of costs for the remainder of the period are the current balance figures of \$2,484.53. These funds are now available and should complete the handling of any activity involved in the completion of the study.

If I can offer any further information please let me know.

Sincerely yours,


I. H. Dwyer, Comptroller

TMD:ma

CC: Dr. W. F. Hamilton

1097933

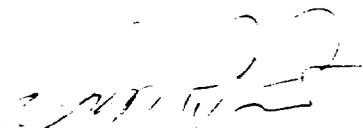
Application for Extension of Grant ABC (40-1) 1975

September 23, 1957

1. Title
Investigation of the results of treating crippling emphysema with I^{131} .
2. Institution
Departments of Physiology, Radiology, Medicine and Thoracic Surgery, Medical College of Georgia
3. Summary

It is desired to follow up and if necessary to re-treat patients in the original series of patients. It is possible that the final write up may disclose the need for beginning treatment of other patients in order to validate conclusions indicated by the data so far.

The school contribution to the budget of the project will be the same as already outlined and is not herewith repeated since this is a request for extension on the same terms of our earlier contract with no additional funds. It is desired merely to have available \$2,484.53 which is on hand at present for further purchase of isotope material until a definitive report can be prepared for publication.



E. B. Fund, President



W. F. Hamilton
Responsible Investigator

1097934

TO : Addressees Listed Below

DATE: January 17, 1957

FROM : John R. Moore, Director, Contract Division

SUBJECT: CONTRACTUAL DOCUMENTS FOR REVIEW, COMMENTS AND INITIALING

The document(s) listed below are forwarded for your review, comments and initials. Upon completion of your review, please attach your comments, if any, and forward to next in turn. Expeditious handling of this matter will be appreciated.

Modification 2 to Contract M-(40-1)-1975 with Medical College of Georgia

<u>Addressees:</u>	<u>Division:</u>	<u>Init:</u>	<u>Date:</u>	<u>Remarks:</u>
1. R. G. Humphries	Contract	<i>RSW</i>	<i>1/17/57</i>	
2. A. E. Miller	Budget	<i>Wolm</i>	<i>1/17/57</i>	
3. C. S. Shoup	Res. & Dev.	<i>CS</i>	<i>1-21</i>	
4. L. D. MacKay	Finance	<i>LM</i>	<i>1-22</i>	
5.				
6.				

Contract
1-21-57

RETURN TO:

Alice Brown

Contract Division

Tel. 4719

Office Memorandum • UNITED STATES GOVERNMENT

TO : J. W. Guld, Jr., Assistant General Counsel

DATE: January 9, 1957

FROM : John R. Moore, Director, Contract Division

SUBJECT: REQUEST FOR MODIFICATION TO CONTRACT AT-(40-1)-1975 WITH MEDICAL COLLEGE OF GEORGIA, AUGUSTA, GEORGIA

SYMBOL: ACD:DS

Please prepare an appropriate modification to subject contract to extend the period to December 31, 1957, with new funds in the amount of \$2,857.00, in accord with the attached program and budget.

Request for contract action from the Research and Development Division is enclosed for your use.


John R. Moore

Enclosures:

1. Reqst for Cont. Action
2. Budget breakdown
3. Program resume'
4. Memo fm Wash.12/7 fm Div.of Biology & Medicine
5. Proposal for Renewal

CC: C. S. Shoup
L. D. MacKay
Alice Brown, w/cy encls 1, 2 & 4



RECEIVED

1. TO: J. P. Moore Chairman Contract Board. From: Res. & Dev. Div.

It is requested that the Contract Board take the necessary action to process the following described contract action in accordance with the provisions of Bulletin OR-O&M-19:

2. Nature of Action Requested

[] Selection of New Contractor and Negotiation of Contract.

[x] Modification of Contract No. AT-(10-1)-1975

Contractor: Medical College of Georgia Augusta, Georgia

[] Review and approval of Contract, Sub-contract or Purchase Order.

[] Other (Explain)

Number: _____

Name: _____

3. Nature of Services to be Covered by Contract

Construction []

Architect-Engineer []

Other [x]

(Explain) Research

4. Funding

Amount to be Obligated by this Contract Action \$ 2,857.00

Source of Funds

Approved ORO Financial Plan, _____ Quarter, Fiscal Year 19__

Project No. _____ or, Activity No. 6320

Funds to be Obligated: Allotment No. 46-71-91(24) Y. 19__ Funds)

Procurement Directive No. BM-57-166 Dated Dec. 7, 1954

Issuing Office Division of Biology & Medicine

Concurrence in Funding Statement: (signed)

A. Miller

Chief, Budget Branch

5. Project or Activity to be Covered by Contract Action:

Location of Work: _____ Construction Directive No. _____

Estimated Cost of Work to be Covered by this Contract Action \$ _____

Schedule: Date Work to Start _____ Estimated Completion Date _____

Description of Project or Activity:

(If more space is required use separate sheets and attach hereto:)

6. Contract Board Docket
No. _____
(To be assigned by
Board Secretary)

7. Request Submitted By: (signed) _____
Date: JAN 7 1957 Title: C. S. Shoup

8. Complete Description of Services to be Furnished by Contractor:

Washington designated research contract
TITLE: "Investigation of the Results of Treating Grippling Emphysema with
I131"

(If more space is required use separate sheets and attach hereto:)

9. Description of other changes to be covered by Modification:

Modify contract to extend the period to December 31, 1957, with new
funds in the amount of \$2,857.

(If more space is required use separate sheets and attach hereto:)

10. Negotiated Contracts. (Show why it appears desirable to negotiate new contract or to negotiate
modification to existing contract)

Memorandum from C. W. Stilling to S. R. Sapirie, dated December 7, 1956.

(If more space is required use separate sheets and attach hereto:)

11. Contracts, Subcontracts, or Purchase Orders Submitted for Review and Approval: (Furnish brief descrip-
tion of action in this space and attach pertinent documents)

None

12. Disputes:

Attach a statement summarizing the dispute together with pertinent documents and Background
Material.

None

1097938

BUDGET FOR CONTRACT NO. AT-(10-1)-1975
FOR PERIOD 1-1-57 - 12-31-57

(1) <u>Salaries and Wages:</u>		\$3,530.00
Dr. W. F. Hamilton (1/10 of time)	\$1,000.00	
Research Associates	1,750.00	
Research Assistant	680.00	
Secretarial Assistance	100.00	
(2) <u>Radioactive Material:</u>		2,615.00
(3) <u>Indirect Costs and Services:</u>		2,185.50
	TOTAL	<u>\$8,360.50*</u>

* It is ^{research} recognized that the program may be further supported from other sources as outlined in the Contractor's proposal.

The Commission's contribution to the above budget will be \$2,857.

1097939

MEDICAL COLLEGE OF GEORGIA
DEPARTMENTS OF PHYSIOLOGY, RADIOLOGY,
MEDICINE AND THORACIC SURGERY
AUGUSTA, GEORGIA.

Contract. No. AT-(40-1)-1975

W. F. HAMILTON, M.D.
Project Leader.

**INVESTIGATION OF THE RESULTS OF TREATING CRIPPLING
EMPHYSEMA WITH IODINE-131.**

Resume'

The contractor will continue work, utilizing Iodine-131 radioactive isotope to determine if iodine will reduce the oxygen demand in patients so that crippling emphysematous lungs will supply the demand with less distress. The encouraging experience with this treatment lends itself to more intensive study, and a series of 26 patients is being followed in order to be sure of the effects of the treatment and to differentiate cases that are or are not helped.

C. S. Sharp

1097940

UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

Contract Authorization No. EM-57-166

TO : S. R. Sapirie, Manager
Oak Ridge Operations Office

FROM : Charles W. Shilling, M. D., Deputy Director
Division of Biology and Medicine, Washington

SUBJECT : FUND AUTHORIZATION AND TRANSMITTAL OF RESEARCH PROPOSAL FOR
CONTRACT NEGOTIATION

REFERENCE : AEC 102/16 APPROVED OCTOBER 7, 1953, AS IMPLEMENTED BY MEMORANDUM
TO MANAGERS, OPERATIONS OFFICES, DATED OCTOBER 23, 1953, JOINTLY
SIGNED BY THE DIRECTORS OF THE DIVISIONS OF RESEARCH AND BIOLOGY
AND MEDICINE.

SYMBOL : **EM:JFE**

The research proposal described below has been approved by the
Division of Biology and Medicine, funds are available, and you
are authorized and requested to negotiate a contract in
accordance with the following terms and conditions:

- ✓ 1. Institution: **Medical College of Georgia**
- ✓ 2. Investigator (s): **W. F. Hamilton**
- ✓ 3. Title: **"Investigation of the Results of Treating Crippling Emphysema with ¹³¹I"**
- ✓ 4. () New Contract, (**x**) Renewal of Contract No. AT(40-1)1975
- ✓ 5. Duration: **1/1/57 through 12/31/57**
6. AEC Technical Representative: **James F. Haggerty**
7. Funds are authorized for the obligation of this contract as follows:

<u>Allotment No.</u>	<u>Budget Category</u>	<u>Previous</u>	<u>Amount This Action</u>	<u>Total</u>
<u>06-71-91 (24)</u>	<u>6320</u>	<u> </u>	<u>\$ 2,857</u>	<u>\$ 2,857</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

F-105-06
DEC 10 1956

1097941

8. It is suggested that in the best interests of the government the following type contract be negotiated: **Lump-sum**

9. It is requested that the title to any capital equipment procured under this contract shall be vested with:

() the contractor; () the government.

10. If radioisotopes are to be used in this research, it is requested that the savings available to the contractor under the Radioisotope Research Support Program (Ref. AEC Manual Chapter 7510) be considered in the negotiation of the amount to be funded under this contract.

11. Other comments:

12. Security Requirements:

In accordance with the provisions of Chapter 3403 of the AEC Manual and the requirements of the Declassification Guide, it has been determined that the following security precautions should be taken in connection with the proposed research contract:

Since there is essentially no chance for the development of restricted data, this project has been placed in Category I as defined in Chapter 3403 of the AEC Manual.

13. Reports: () Reports are to be required as provided for by "Revised Guide for the Submission of Research Proposals" dated February 8, 1954.

() Special reports instructions are as follows:

Enclosures: () "A" - Proposal, dated September 26, 1956
() "B" - Notification letter, dated DEC 7 1956
() "C" - Other correspondence, none letters

Distribution:

Addressee: Original (w encl.) Division File: Yellow copy (w encl.)
1st copy (w encl.) Pink copy (w/o encl.)
2nd copy (w encl.)

Branch File: White copy (w encl.)

Program Analysis Branch:
White copy (w/o encl.)

Application for Renewal
of Contract A F (40-1)- 1975

September 26, 1956

1. Title

Investigation of the results of treating crippling emphysema
with I¹³¹.

2. Institution

Departments of Physiology, Radiology, Medicine and Thoracic
Surgery, Medical College of Georgia.

Summary

The series of 26 patients are being followed in order to be sure
of the effects of the treatment and to differentiate cases that are or
are not helped. The Medical, Radiological, and Surgical Departments
involved in this work have been occupied in moving into their new Tal-
madge Memorial Hospital and the work has been at a standstill during
most of the past year. It is fully expected that we will be able to
continue the work during the coming year and will publish further reports.

Signature


H.B. O'Rear, Dean


W.F. Hamilton, Responsible Investigator

1097943

4. Scientific Background and Scope of Proposed Research

The hypothesis is being tested that I^{131} will reduce O_2 demand so that crippled emphysematous lungs may supply this demand with less distress than the larger normal demand. The experience with the treatment has been encouraging and will be given more intensive study in the new hospital. There was a gap in the purchase of I^{131} because of necessary reorganization.

5. Scientific Personnel

1. W.F. Hamilton, Professor of Physiology and Responsible Investigator.
2. Lois T. Ellison, M.D. Research Associate in Physiology in charge of laboratory testing.
3. R.G. Ellison, M.D., Assistant Research Professor of Physiology, consultant to Dr. Lois Ellison.
4. S. Shannon Callahan, M.D., Assistant Professor of Medicine, in charge of clinical evaluation. Will consult with V.P. Sydenstricker and Thomas Findley.
5. W.F. Hamilton, Jr., M.D., Board Radiologist trained at Oak Ridge to administer isotopes, in regular receipt of isotopes. He initiated the project and followed the first clinical cases.
6. Dr. I.F. LaNette, Clinical instructor in Radiology.

6. Other Personnel

One or more technicians.

7. All Salaries being paid by school, Hospital or unrestricted grants.
8. Equipment has been added to substantially as a part of the new hospital.

It is not inventoried as yet. All equipment mentioned in earlier applications is available.

9. Travel

No allowance.

10. Budget

1097944

We will need a tracer vial for each visit - 2 or 3 per week including re-examinations at \$5.00 each or \$125.00. We hope to process 50 patients during the year. Holmes and Brown estimate that I¹³¹ costs them \$1.31 per milli-curie F.C.B. Augusta. The average patient will get 25 mc. per dose and some of them two doses - say 40 mc. per patient or \$2520.00. Thus:

Tracer material	\$125.00
Treatment material	2520.00
Subtotal	2645.00
8% overhead	<u>211.60</u>
Total	2856.60

Cost born by school substantial but hard to evaluate.

10. Budget

<u>Salaries</u>	<u>Total</u>	<u>College</u>	<u>GRANT¹</u>	<u>SAEC</u>
Hamilton, William F., Sr. ²	10,500.00	10,000.00		
Ellison, Dr. Robert G. ²	9,450.00	9,000.00		
Ellison, Dr. Lois ²	3,780.00		3,600.00	
Gallaher, Dr. B. Shannon ²	8,925.00	8,500.00		
Hague, W. C. ³	3,468.00	3,400.00		
<u>Supplies</u>				
Chemicals	300.00		300.00	
Glassware	300.00		300.00	
Radioactive Material	2,645.00			2,645.00
<u>Services</u>				
Secretarial	100.00	100.00		
Janitorial	100.00	100.00		
Laundry	50.00	50.00		
Utilities	112.00	100.00		112.00 ⁴
<u>Space Occupancy</u>				
4 laboratory areas, 649 sq. ft. at \$2.50	1,723.50	1,723.50 ⁵		
<u>Travel</u>				
<u>Total</u>	<u>41,653.50</u>	<u>32,973.50</u>	<u>4,200.00</u>	<u>2,857.00</u>

1. Funds from grant sources used under direction of Dr. W. F. Hamilton, Sr., Department of Physiology
2. Amounts include retirement costs paid by Regents of the University System of Georgia
3. Amount includes Social Security Costs paid by the Medical College of Georgia
4. Overhead - 8%
5. Space provided in Eugene Talmdage Memorial Hospital, the new teaching hospital of the Medical College of Georgia

11. Amount Requested

Funds from the Medical College of Georgia	34,596.50
Funds from grant source	4,200.00
Funds from the U. S. Atomic Energy Commission	2,857.00

1097946

-4-

Progress Report:

Due to the fact that the clinical collaborators in this project have moved into the new Eugene Talmadre Memorial Hospital, an 800 bed \$15,000,000 structure, the project has not shown definitive progress which can be set down in writing. The patients have been treated, followed clinically and detailed histories taken but the time consuming job of evaluation has not been done.

We are convinced, however, that the original idea of treating emphysematous patients with I^{131} is sound in that it gives worthwhile palliation, and that with new equipment and facilities furnished by the hospital, the job can be done in good shape.

October 30, 1956

Subject: Contract AT-(40-1)-1975

Statement of Expenditures, Second Period:

	<u>College Contributions</u>	<u>Commission Contributions</u>
Costs to date:		
Salaries and Wages		
W. F. Hamilton	\$ 637.00	
Research Associates	2,119.00	
Research Assistants	<u>1,625.00</u>	
	\$4,381.00	
Radioactive Material		\$1,795.97
Indirect Costs and Services	<u>1,582.00</u>	<u> </u>
	\$5,963.00	\$1,795.97
Estimate of Costs for Remainder of Period	1,194.00	849.03
Balance unused	<u> 0</u>	<u> 0</u>


Controller

1097948

UNITED STATES OF AMERICA

DEPARTMENT OF ENERGY

November 25, 1976

**In Reply To:
02-000**

**C. S. Sney
Chief, Biology Branch
Research and Development Division
United States Atomic Energy Commission
Oak Ridge, Tennessee**

Dear Mr. Sney:

Yours of the 12th has been received.
The approximate part of time given by technical and professional personnel to AT-(40-1)-1975 is as follows:

- Hamilton 1/10 time
- Ellison, R. C. 1/10 time
- Ellison, L. 1/3 time
- Gallagher 1/10 time
- Boyer 1/3

Yours truly,

M. P. Hamilton

MPH:aw

*4-7811
7-12-20*

Office Memorandum • UNITED STATES GOVERNMENT

TO : J. W. Ould, Jr., Assistant General Counsel

DATE: January 16, 1956

FROM : John R. Moore, Director, Contract Division

SUBJECT: RENEWAL OF CONTRACT NO. AT-(40-1)-1975 - MEDICAL COLLEGE OF GEORGIA

SYMBOL: ADA:ARB

Enclosed is an approved proposal for renewal of subject contract for a period of one year beginning January 1, 1956. This action is covered by Contract Authorization No. BM-56-130, dated December 28, 1955, in the amount of \$2,857.00.

Please prepare an appropriate modification to renew this contract for a period of one year, beginning January 1, 1956, with Commission funds in the amount of \$2,857.00. Provision for compliance with AEC Manual Chapter 7510 should be included in the modification.


John R. Moore

Enclosures:

1. Request for Contract Action
2. Budget
3. Resume'
4. Contract Authorization BM-56-130
5. Renewal Proposal

CC: C. S. Shoup
L. D. MacKay
J. Nicholson, w/Encls. 1 and 2

9358

1. TO: J. R. Moore Chairman Contract Board. From: Research & Development Div.

It is requested that the Contract Board take the necessary action to process the following described contract action in accordance with the provisions of Bulletin OR-O&M-19:

2. Nature of Action Requested

[] Selection of New Contractor and Negotiation of Contract.

[X] Modification of Contract No. AT-(10-1)-1975 Contractor: Medical College of Georgia Augusta, Georgia

[] Review and approval of Contract, Sub-contract or Purchase Order. Number: Name:

[] Other (Explain)

3. Nature of Services to be Covered by Contract

Construction [] Architect-Engineer [] Other [X] (Explain) Research 6.77

4. Funding Amount to be Obligated by this Contract Action \$2,857.00 \$1,656.00

Source of Funds

Approved ORO Financial Plan, Quarter, Fiscal Year 19 Project No. or, Activity No. 6320 Funds to be Obligated: Allotment No. 06-41-91(24) F.Y. 19 Funds Procurement Directive No. BM-56-120 Dated Dec 28, 1955 Issuing Office Division of Biology & Medicine

Concurrence in Funding Statement: (signed)

Joseph L. Potter Chief, Budget Branch 1/16/56

5. Project or Activity to be Covered by Contract Action:

Location of Work: Construction Directive No. Estimated Cost of Work to be Covered by this Contract Action \$ Schedule: Date Work to Start Estimated Completion Date Description of Project or Activity:

(If more space is required use separate sheets and attach hereto:)

6. **Contract Board Docket**
No. _____
(To be assigned by
Board Secretary)

7. **Request Submitted By (signed)** _____

Date: 7-12-56 Title: _____

Herman M. Roth
HERMAN M. ROTH
DIRECTOR
RESEARCH AND DEVELOPMENT DIVISION

8. **Complete Description of Services to be Furnished by Contractor:**

Washington designated Research Contract.
Title: Investigation of the Results of Treating Crippling Emphysema
with I-131

(If more space is required use separate sheets and attach hereto:)

9. **Description of other changes to be covered by Modification:**

Renew contract for a period of one year beginning January 1, 1956, with
Commission funds in the amount of ~~\$2,857.00.~~ \$1,656.00.
E.M.

Include provisions for compliance with AEC Manual Chapter 7510.

(If more space is required use separate sheets and attach hereto:)

10. **Negotiated Contracts.** (Show why it appears desirable to negotiate new contract or to negotiate
modification to existing contract)

Memo from C. W. Shilling to S. R. Sapirie dated December 28, 1955.

(If more space is required use separate sheets and attach hereto:)

11. **Contracts, Subcontracts, or Purchase Orders Submitted for Review and Approval:** (Furnish brief descrip-
tion of action in this space and attach pertinent documents)

None

12. **Disputes:**

Attach a statement summarizing the dispute together with pertinent documents and Background
Material.

None

18063

1097952

In reply
Refer to: 44-1111

Oak Ridge, Tennessee
January 26, 1956

Mr. Thomas M. Dwyer, Comptroller
Medical College of Georgia
Augusta, Georgia

Subject: CONTRACT NO. AT-(40-1)-1975

Dear Mr. Dwyer:

In accordance with your letter of January 19, 1956, and your telephone conversation on January 25 with Mr. J. E. Rounsaville of our office, we have changed the amount of the Commission's contribution for the contract period beginning January 1, 1956. A copy of the budget, with the revised funding information, is enclosed for your information. The Commission's contribution in new funds for the period will be \$1,050.

Your cooperation is appreciated.

Very truly yours,

C. S. Shoup
Chief, Biology Branch
Research and Development Division

Enclosure:
Budget

cc: S. H. Hamilton w/cy of budget
J. K. Moore ✓

Res. Ser. Br. Bio. Br.

Rounsaville:skt

1097953

BUDGET FOR CONTRACT NO. AT-(40-1)-1975
FOR PERIOD 1-1-56 through 12-31-56

SALARIES AND WAGES:		\$5,575.00
Dr. W. F. Hamilton, Sr. (10% of time)	\$ 850.00	
Research Associates	2,825.00	
Research Assistants	1,900.00	
RADIOACTIVE MATERIAL:		2,645.00
INDIRECT COSTS AND SERVICES:		<u>1,582.00</u>
		\$9,802.00

The Commission's contribution to the above budget will be \$1,656.00; the Contractor's contribution will be \$6,945.00; and \$1,201.00 is the estimated unexpended balance.

1097954

MEDICAL COLLEGE OF GEORGIA
AUGUSTA, GEORGIA.

Dr. W. F. Hamilton
Project Leader:

INVESTIGATION OF THE RESULTS OF TREATING CRIPPLING
EMPHYSEMA WITH IODINE-131.

Resume'

The Contractor proposes continuing studies and clinical trials in investigating clinical, respiratory, and physiological mechanisms involved in response to Iodine-131 relative to the disorder. In so doing, clinical evaluations will be made, pulmonary characteristics will be determined, and pulmonary diffusion in rest and exercise will be measured. It is hoped that criteria set up will aid arrival at a differential prognosis as to the effect of treatment on the disease.

C. S. Shoup

UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

Contract Authorization No. EM-56-130

DEC 2 - 1955

TO : S. R. Sapirie, Manager
Oak Ridge Operations Office

FROM : Charles W. Shilling, M. D., Deputy Director
Division of Biology and Medicine, Washington *C. W. Shilling*

SUBJECT : FUND AUTHORIZATION AND TRANSMITTAL OF RESEARCH PROPOSAL FOR
CONTRACT NEGOTIATION

REFERENCE : AEC 102/16 APPROVED OCTOBER 7, 1953, AS IMPLEMENTED BY MEMORANDUM
TO MANAGERS, OPERATIONS OFFICES, DATED OCTOBER 23, 1953, JOINTLY
SIGNED BY THE DIRECTORS OF THE DIVISIONS OF RESEARCH AND
BIOLOGY AND MEDICINE.

SYMBOL : **BMM:JFH**

The research proposal described below has been approved by the Division of Biology and Medicine, funds are available, and you are authorized and requested to negotiate a contract in accordance with the following terms and conditions:

1. Institution: Medical College of Georgia
2. Investigator (s): W. F. Hamilton
3. Title: "Investigation of the Results of Treating Crippling Emphysema with I-131"
4. () New Contract, (x) Renewal of Contract No. AT(40-1)1975
5. Duration: 1/1/56 through 12/31/56
6. AEC Technical Representative: James F. Haggerty *JFH*
7. Funds are authorized for the obligation of this contract as follows:

<u>Allotment No.</u>	<u>Budget Category</u>	<u>Amount</u>		<u>Total</u>
		<u>Previous</u>	<u>This Action</u>	
<u>06-61-91 (24)</u>	<u>6320</u>	<u> </u>	<u>\$2,857</u>	<u>\$2,857</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

JAN 3 1956
E-8925

8. It is suggested that in the best interests of the government the following type contract be negotiated: Lump-sum
9. It is requested that the title to any capital equipment procured under this contract shall be vested with:

(x) the contractor; () the government.

10. Other comments:

If radioisotopes are to be used in this research, it is requested that the savings available to the contractor under the Radioisotope Research Support Program (Ref. AEC Manual Chapter 7510) be considered in the negotiation of the amount to be funded under this contract.

Your attention is called to a copy of the attached letter from Dr. Hamilton to Mr. Haggerty, and which is dated November 22, 1955.

11. Security Requirements:

In accordance with the provisions of Chapter 3403 of the AEC Manual and the requirements of the Declassification Guide, it has been determined that the following security precautions should be taken in connection with the proposed research contract:

Since there is essentially no chance for the development of restricted data, this project has been placed in Category I as defined in Chapter 3403 of the AEC Manual.

12. Reports: (x) Reports are to be required as provided for by "Revised Guide for the Submission of Research Proposals" dated February 8, 1954.

() Special reports instructions are as follows:

Enclosures: (x) "A" - Proposal, dated _____
(x) "B" - Notification letter, dated DEC 23 1955
(x) "C" - Other correspondence, one letters/
Hamilton to Haggerty

Distribution:

Addressee: Original (w encl.) Division File: Yellow copy (w encl.)
1st copy (w encl.) Pink copy (w/o encl.)
2nd copy (w encl.)

Branch File: White copy (w encl.)

Program Analysis Branch:
White copy (w/o encl.)

MEMO ROUTE SLIP Form ABC-98 (Rev. May 14, 1947)		See me about this. Note and return.	For concurrence. For signature.	For action. For information.
1. G. W. MIT	INITIALS <i>W.H.</i>	REMARKS		
2. M. Barclay	DATE FEB 9	356		
3. S. W. Scott Patents Branch	INITIALS <i>S.L.</i>	REMARKS		
	DATE 2/9			
4. J. Nicholson Contracts	INITIALS	REMARKS		
	DATE			
FROM (Name and unit) T. I. Carroll	REMARKS	Budget was revised subsequent to request because of unexpended balance of \$1201 which turned up - see pages attached to front of back up		
PHONE NO. 4363	DATE 2-9-56			

99

USE OTHER SIDE FOR ADDITIONAL REMARKS

16-50667-1 U. S. GOVERNMENT PRINTING OFFICE

1097958

evaluate the thyroid uptake of I^{131} and to administer it in controlled dosage for treatment.

9. Travel

No allowance.

10. Budget

We will need a tracer vial for each visit - 2 or 3 per week including re-examinations at \$5.00 each or \$125.00. We hope to process 50 patients during the year. Holmes and Brown estimate that I^{131} costs them \$1.31 per millicurie F.O.B. Augusta. The average patient will get 25 mc per dose and some of them two doses - say 40 mc per patient or \$2520.00. Budget as follows:

(1) Salaries and Wages		5575.00
Dr. W. F. Hamilton, Sr.	(10% of time)	850.00
Dr. B. Shannon Gallaher	(10% of time)	600.00
Dr. Lois Ellison	(50% of time)	1800.00
Dr. Robert Ellison	(5% of time)	425.00
Billie McPherson-Tech.	(75% of time)	1800.00
Juanita Davidson-Sec.Asst.	(5% of time)	100.00
(2) Radioactive Material		2645.00
(3) Indirect Costs and Services		1582.00

	TOTAL	\$9802.00
Unexpended Balance 12/31/55		1201.00

	Adjusted Budget Total	\$8601.00

1097959

F-241
FEB 6 1958

RENEWAL APPLICATION CONTRACT AT-(40-1)-1975

1. Title

Investigation of the results of treating crippling emphysema with I¹³¹.

2. Institution

Departments of Physiology, Radiology, Medicine and Thoracic Surgery, Medical College of Georgia.

Summary:

26 patients have been diagnosed by clinical and pulmonary function tests to be severely handicapped by obstructive pulmonary disease and to have been confined to the house for five years or more. Treatment did not affect their ventilatory capacity but improved their blood gas tensions and clinical condition so that 10 were able to return to gainful employment (4+), 6 showed 3+ improvement, 5, 2+ and 5 no improvement. This work has been reported to the Georgia Medical Society, the American Physiological Society and will be reported to the next meeting of the American Heart Association. Manuscripts are in preparation and in press.

The help of the Atomic Energy Commission is solicited in the purchase of I¹³¹ to continue this research so that the most useful application of this very successful palliation may be worked out.

Signatures

H. B. O'Keefe

H.B. O'Keefe, Dean

W. F. Hamilton

W.F. Hamilton, Principle Investigator

3 and 4. Background and Scope.

The hypothesis being tested is that since radioactive iodine ameliorates the distress and lessens the disability of various types of heart failure patients, the same result can be expected in cases of crippling emphysema. In both diseases the difficulty is in supplying the tissues with oxygen. In one, the handicap is inadequate cardiac pumping; in the other, the handicap is inadequate pulmonary ventilation. In both diseases palliative amelioration of symptoms may be expected, but no change in the fundamental disease process.

The hypothesis has been tested in several clinical trials, successful, unsuccessful, and intermediate. In the successful cases the patient was restored to activity and useful work. In the intermediate cases there was some palliation but no substantial improvement. The unsuccessful cases were unaffected by the treatment.

The results were promising enough so that the above departments decided to cooperate in investigating clinical, respiratory and physiological mechanisms involved in the response to I^{131} . In doing this we will 1) get a thorough clinical evaluation of the patient; 2) estimate the ventilatory function by such tests as maximum breathing capacity, timed vital capacity residual air, pulmonary mixing and 3) evaluate pulmonary diffusion by measuring O_2 tensions and saturation, alveolar arterial gradient at rest and during mild exercise. This careful evaluation will be done periodically during the course of treatment in the hope that criteria can be set up to arrive at a differential prognosis as to the effect of the treatment on the disease.

5. Scientific Personnel

W.F. Hamilton, Ph.D., Professor of Physiology, responsible investigator, will spend a few hours a week in consultation and criticism of the project as it develops. He has spent his life in cardiovascular research. The last five of his publications are below:

Ellison, R.G., R.C. Major, R.W. Pickering, and W.F. Hamilton
"Further Experiences with a Technique of Producing Mitral Stenosis of a
Controlled Degree". Surgical Forum of the Amer. College of Surgeons, 1952.

Hamilton, W.F. "The Lewis A. Connor Memorial Lecture - The Physiology
of the Cardiac Output." Circ. 2, 527, 1953.

Howard, A.R., W.F. Hamilton and P. Dew. "Limitations of the Continuous
Infusion Method for Measuring Cardiac Output by Dye Dilution." A.J.P. 175:
173, 1953.

Hamilton, W.F. "The Physiology of Congestive Failure of the Circulation"
Minnesota Medicine 37: 105, 1954.

Hamilton, W.F., R.G. Ellison, R.W. Pickering, E.E. Hagen and J.T. Rucker
Hemodynamic and Endocrine Responses to Experimental Mitral Stenosis".
A.J.P. 176: 445, 1954.

Lois T. Ellison, M.D., Research Associate in Physiology in charge of
laboratory testing.

R.G. Ellison, M.D., Assistant Research Professor of Physiology, consultant
to Dr. Lois Ellison.

B. Shannon Callahan, M.D., Assistant Professor of Medicine, in charge of
clinical evaluation. Will consult with V.P. Sydenstricker and Thomas Findley.

W.F. Hamilton, Jr., M.D., Board Radiologist trained at Oak Ridge to
administer isotopes, in regular receipt of isotopes (Partner in Holmes and Brown,
Radiologists). He initiated the project and followed the first clinical cases.
He will consult Drs. Holmes and Brown.

6. Other Personnel

A technician is available and the house staff in Medicine and Radiology are
cooperating.

7. Other Financial Assistance

The salaries of the above personnel are being paid either by the school or
by unrestricted research grants. It is hard to estimate the value of these salaries
or the equipment furnished by the school.

8. Facilities

Facilities have been augmented by a Nitrogen Meter and minor items.

9. Travel

No allowance.

1097962



10. Budget

Analysis of anallary funds from School and U.S.P.H.S. like that presented in previous application.

Expendible budget 1956

Tracer material	\$125.00
Treatment material	<u>2520.00</u>
Subtotal	2645.00
8% overhead	<u>211.60</u>
Total	2856.60

See total cost budget attached.

~~evaluate the thyroid uptake of I¹³¹ and to administer it in controlled dosage for treatment.~~

9. Travel

No allowance.

10. Budget

We will need a tracer vial for each visit - 2 or 3 per week including re-examinations at \$5.00 each of \$125.00. We hope to process 50 patients during the year. Holmes and Brown estimate that I¹³¹ costs them \$1.31 per millicurie F. O. B. Augusta. The average patient will get 25 mc per dose and some of them two doses - say 40 mc per patient or \$2520.00. Budget as follows:

(1) Salaries and Wages		5575.00
Dr. W. F. Hamilton, Sr. (10% of time)	850.00	
Dr. B. Shannon Gallaher (10% of time)	600.00	
Dr. Lois Ellison (50% of time)	1800.00	
Dr. Robert Ellison (5% of time)	425.00	
Billie McPherson-Tech. (75% of time)	1800.00	
Juanita Davidson-Sec.Asst. (5% of time)	100.00	
(2) Radioactive Material		2645.00
(3) Indirect Costs and Services		1582.00
		<hr/>
	TOTAL	\$9802.00

Progress Report

Contract No. AT - (40-1) - 1975

Investigation of the results of treating Crippling Emphysema with I^{131}

The study of this hopeless disease was undertaken a year ago last May and since January 1, 1955 has been supported by the Atomic Energy Commission in the purchase of radioactive iodine. Salaries and equipment have been obtained elsewhere.

A series of patients who apparently suffered from severe obstructive lung disease were evaluated by a complete clinical examination, a series of pulmonary function tests and thyroid function tests. Twenty six patients were selected because they had severe pulmonary handicaps, a very poor prognosis, no evidence of severe hypothyroidism were reasonably cooperative and intelligent and had been under the care of competent physicians.

They were treated (with double blind placebo control) with 25 mc I^{131} . Because of placebo administration, iodine saturation, or early thyroid regeneration, several had to be re-treated.

Of the 26 patients, 10 who had been confined to the house for 5 years or more were rendered capable of gainful employment, (4+), 6 were 3+, 5 were 2+ and 5 showed little or no improvement.

The ventilatory capacity tests, maximum breathing capacity, vital capacity, timed vital capacity, residual volume, and intrapulmonary mixing showed that the severe initial handicap was unchanged. Oxygen consumption was reduced and to a lesser extent alveolar ventilation. Physiological dead space, arterial P_{CO_2} and alveolo-arterial PO_2 was increased. It is hoped to continue this study to learn which patients respond best to this test and how best to administer it. Publications are in press or preparations. *maintain*

1097965

Office Memorandum • UNITED STATES GOVERNMENT

TO : J. W. Ould, Jr., Assistant General Counsel DATE: December 27, 1954

FROM : R. G. Humphries, Assistant Director, Contract Division

SUBJECT: REQUEST FOR PREPARATION OF A RESEARCH CONTRACT WITH MEDICAL COLLEGE OF GEORGIA, DR. W. F. HAMILTON, PROJECT LEADER

SYMBOL: ADA:ARB

Enclosed is an approved proposal from the Medical College of Georgia for a research project entitled "Investigation of the Results of Treating Crippling Emphysema with I-131", with Dr. W. F. Hamilton as Project Leader. This action is covered by Activity No. 6300, Allotment No. 06-51-91(24) (F.Y. 1955 Funds), Contract Authorization No. EM-55-90 dated October 28, 1954.

Please prepare an appropriate research contract to cover this program for a period of one year beginning January 1, 1955, with Commission funds in the amount of \$2,857.00.



R. G. Humphries

Enclosures:

1. Request for Contract Action
2. Budget for New Contract
3. Resume
4. Cy Ltr fm Shoup dtd 12/17/54
5. Contract Authorization EM-55-90
6. Ltr fm Hamilton dtd 12/8/54
7. Proposal

CC: C. S. Shoup
L. D. MacKay
J. Nicholson, w/Encls. 1 and 2

Brown:arb

1. Chairman
TO: J. R. Moore Contract Board. From: Res. & Med. Div.

It is requested that the Contract Board take the necessary action to process the following described contract action in accordance with the provisions of Bulletin OR-O&M-19:

2. Nature of Action Requested

- Selection of New Contractor and Negotiation of Contract. Medical College of Georgia Augusta, Georgia
- Modification of Contract No. _____ Contractor: _____
- Review and approval of Contract, Sub-contract or Purchase Order. Number: _____ Name: _____
- Other (Explain) _____

OK
H
12/27/54

3. Nature of Services to be Covered by Contract

Construction Architect-Engineer Other (Explain) Research

4. Funding Amount to be Obligated by this Contract Action \$ 2,850,000/54

Source of Funds

Approved ORO Financial Plan, _____ Quarter, Fiscal Year 19____
Project No. _____ or, Activity No. 6300
Funds to be Obligated: Allotment No. 06-5-9(2) F.Y. 1955 Funds)
Procurement Directive No. B7-55-90 Dated 10-28-54
Issuing Office Div. of Biology & Medicine

Concurrence in Funding Statement: (signed) Joseph Potter
Chief, Budget Branch 12/27/54

5. Project or Activity to be Covered by Contract Action:

Location of Work: _____ Construction Directive No. _____
Estimated Cost of Work to be Covered by this Contract Action \$ _____
Schedule: Date Work to Start _____ Estimated Completion Date _____
Description of Project or Activity:

(If more space is required use separate sheets and attach hereto:)

<p>6. Contract Board Docket No. _____ (To be assigned by Board Secretary)</p>	<p>7. Request Submitted By: (signed) _____ Date: 12-23-54 Title: <i>Herman M. Roth</i> DIRECTOR RESEARCH AND MEDICINE DIVISION</p>
<p>8. <u>Complete Description of Services to be Furnished by Contractors:</u> Washington designated research contract Title: "Investigation of the Results of Treating Crippling Emphysema with I-131" (If more space is required use separate sheets and attach hereto:)</p>	
<p>9. <u>Description of other changes to be covered by Modification:</u> New contract for a period of one year beginning January 1, 1955, with Commission funds in the amount of \$2,857 (If more space is required use separate sheets and attach hereto:)</p>	
<p>10. <u>Negotiated Contracts.</u> (Show why it appears desirable to negotiate new contract or to negotiate modification to existing contract) Memo J. C. Bugher, to Sapirie dated October 28, 1954 (If more space is required use separate sheets and attach hereto:)</p>	
<p>11. <u>Contracts, Subcontracts, or Purchase Orders Submitted for Review and Approval:</u> (Furnish brief descrip- tion of action in this space and attach pertinent documents) None</p>	
<p>12. <u>Disputes:</u> Attach a statement summarizing the dispute together with pertinent documents and Background Material. None</p>	

1097968

In Reply
Refer to: CR:JER

Oak Ridge, Tennessee
December 22, 1964

H 17/27

Dr. W. F. Hamilton
Department of Physiology, Radiology,
and Medicine
Medical College of Georgia
Augusta, Georgia

Subject: RESEARCH CONTRACT

Dear Dr. Hamilton:

Reference is made to our letter of November 12, 1964, and your reply of December 8, 1964, regarding the budget for the contract covering your work on "Investigation of the Results of Treating Crippling Emphysema with I-131."

We have initiated action for the preparation of a contract covering your work. The effective date of the contract will be January 1, 1965, with the Commission contributing \$2,857. Utilizing the percentage figures presented in your letter and the full salary for each individual as shown in the revised budget, we have computed the portions of funds for salaries allocable to the project. We are enclosing a copy of the total-cost budget we prepared for inclusion in the contract. If this budget is not acceptable, please advise us and we will make the necessary changes. As a matter of information, we have shown only those items which would be contributed by the Medical College of Georgia and the Commission. We will recognize the support from the USPHS by a general statement.

Your cooperation in this matter is appreciated.

Very truly yours,

G. S. Shoup
Chief, Biology Branch
Research and Medicine Division

Enclosure:
Budget

CC: J. R. Moore

Roanoville:lr

1097969

Budget For New Contract - W. F. Hamilton

For Period 1-1-55 - 12-31-55

Salaries and Wages:			4,560.00
Dr. W. F. Hamilton	(10% of time)	\$ 850.00	
Research Associates		1,810.00	
Research Assistants, Technician, etc.		1,800.00	
Secretarial Assistance		100.00	
Supplies:			2,645.00
Indirect Costs & Services			1,592.00
			<u>78,797.00</u>

The Commission's contribution to the above budget will be \$2,857.00.

Recognize that portions of the funds have already been spent and that the work has been going on since May 1954.

Recognize support from other agency as shown in contractor's proposal.

1097970

MEDICAL COLLEGE OF GEORGIA
AUGUSTA, GEORGIA.

Cooperative Project of the Departments of Physiology, Radiology, Medicine,
and Thoracic Surgery, Medical College of Georgia.

Dr. W. F. Hamilton, Project Leader.

INVESTIGATION OF THE RESULTS OF TREATING CRIPPLING
EMPHYSEMA WITH IODINE-131.

Resume'

Determination will be made as to whether administration of Iodine-131 will lessen the oxygen demand by tissues of emphysematous patients to a degree that they will be made more comfortable and useful and perhaps postpone their exitus. By clinical and laboratory tests, cardiovascular and pulmonary information will be obtained from the patients periodically during the course of treatment with view of careful arrival at an evaluation of the treatment.

C. S. Shoup

In Reply
Refer to: CR:JER

Oak Ridge, Tennessee
December 17, 1964

Dr. W. F. Hamilton
Department of Physiology, Radiology,
and Medicine
Medical College of Georgia
Augusta, Georgia

Subject: RESEARCH CONTRACT

Dear Dr. Hamilton:

Reference is made to our letter of November 12, 1964, and your reply of December 8, 1964, regarding the budget for the contract covering your work on "Investigation of the Results of Treating Crippling Euphysema with I-131."

Utilizing the percentage figures presented in your letter and the full salary for each individual as shown in the revised budget, we have computed the portions of funds for salaries allocable to the project. We are enclosing a copy of the total-cost budget we prepared for inclusion in the contract. If this budget is not acceptable, please advise us and we will make the necessary changes. As a matter of information, we have shown only those items which would be contributed by the Medical College of Georgia and the Commission. We will recognize the support from the USFEB by a general statement.

Your cooperation in this matter is appreciated.

Very truly yours,

G. S. Shoup
Chief, Biology Branch
Research and Medicine Division

Enclosure:
Budget

CC: J. R. Moore —

Rounsaville:lr

1097972

UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

Contract Authorization No. BM-55-90

TO : S. R. Sapiro, Manager
Oak Ridge Operations Office

FROM : J. C. Bugher, M. D., Director
Division of Biology and Medicine

SUBJECT : FUND AUTHORIZATION AND TRANSMITTAL OF RESEARCH PROPOSAL FOR
CONTRACT NEGOTIATION

REFERENCE : AEC 102/16 APPROVED OCTOBER 7, 1953, AS IMPLEMENTED BY MEMO
TO MANAGERS, OPERATIONS OFFICES, DATED 10/23/53, JOINTLY
SIGNED BY THE DIRECTORS OF THE DIVISIONS OF RESEARCH AND
BIOLOGY AND MEDICINE.

OCT 28 1954

20 for J. C. B.

SYMBOL : EMM:FGL

The research proposal described below has been approved by the Division of Biology and Medicine, funds are available, and you are authorized and requested to negotiate a contract in accordance with the following terms and conditions:

1. Institution: Medical College of Georgia
2. Investigator (s): W. F. Hamilton
3. Title: "Investigation of the Results of Treating Crippling Emphysema with I-131"

4. (x) New Contract or () Renewal of Contract No. _____

5. Duration - From: One year To:

6. AEC Technical Representative: Paul G. LeFevre *LeF*

7. Contract Fund Authorization:

Funds are authorized for the obligation of this contract as follows:

<u>Allotment No.</u>	<u>Budget Category</u>	<u>Previous</u>	<u>Amount This Action</u>	<u>Total</u>
06-51-91 (24)	6300		\$2,857	\$2,857
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

8. It is suggested that in the best interests of the government the following type contract be negotiated: Lump-sum
9. It is requested that the title to any capital equipment procured under this contract shall be vested with: (x) the contractor
() the government
10. Other Comments:

Please obtain a more specific statement of the MCG and other contributions, in terms of estimated operating costs for the year, and send two copies to the Division of Biology and Medicine.

11. Security Requirements:

In accordance with the provisions of GM-CLA-2 (Revised Sept. 29, 1953), and the requirements of the Declassification Guide, it has been determined that the following security precautions should be taken in connection with the proposed research contract:

Since there is essentially no chance for the development of restricted data, this project has been placed in Category I as defined in GM-CLA-2.

12. Reports: (x) Reports are to be required as provided for by "Revised Guide for the Submission of Research Proposals" dated February 8, 1954.
- () Special Reports Instructions are as follows:

- Enclosures: (x) "A" - Proposal, dated _____
- (x) "B" - Notification letter, dated _____
- () "C" - Other correspondence, _____ letters

Distribution:

Addressee: Original (w encl.) Division File: Yellow Copy (w encl.)
1st Copy (w encl.) Pink Copy (w/o encl.)
2nd Copy (w encl.)

Program Analysis Branch File: White Copy (w encl.)
Branch: White Copy (w/o encl.)

UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

Contract Authorization No. EM 55-00

TO : S. R. Sapiro, Manager
Oak Ridge Operations Office

FROM : J. C. Bagher, M. B., Director
Division of Biology and Medicine

SUBJECT : FUND AUTHORIZATION AND TRANSMITTAL OF RESEARCH PROPOSAL FOR
CONTRACT NEGOTIATION

REFERENCE : AEC 102/16 APPROVED OCTOBER 7, 1953, AS IMPLEMENTED BY MEMO
TO MANAGERS, OPERATIONS OFFICES, DATED 10/23/53, JOINTLY
SIGNED BY THE DIRECTORS OF THE DIVISIONS OF RESEARCH AND
BIOLOGY AND MEDICINE.

SYMBOL : ~~EM~~:FGL
The research proposal described below has been approved by
the Division of Biology and Medicine, funds are available, and
you are authorized and requested to negotiate a contract in
accordance with the following terms and conditions:

1. Institution: Medical College of Georgia
2. Investigator (s): W. F. Hamilton
3. Title: "Investigation of the Results of Treating
Crippling Emphysema with I-131"

4. (x) New Contract or () Renewal of Contract No. _____

5. Duration - From: One year To:

6. AEC Technical Representative: Paul G. LaFevre

7. Contract Fund Authorization:

Funds are authorized for the obligation of this contract
as follows:

<u>Allotment No.</u>	<u>Budget Category</u>	<u>Previous</u>	<u>Amount This Action</u>	<u>Total</u>
<u>06-51-91 (24)</u>	<u>6300</u>	_____	<u>\$2,857</u>	<u>\$2,857</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

1097975

8. It is suggested that in the best interests of the government the following type contract be negotiated: **Lump-sum**
9. It is requested that the title to any capital equipment procured under this contract shall be vested with: () the contractor
() the government
10. Other Comments:

Please obtain a more specific statement of the MDG and other contributions, in terms of estimated operating costs for the year, and send two copies to the Division of Biology and Medicine.

11. Security Requirements:

In accordance with the provisions of GM-CLA-2 (Revised Sept. 29, 1953), and the requirements of the Declassification Guide, it has been determined that the following security precautions should be taken in connection with the proposed research contract:

Since there is essentially no chance for the development of restricted data, this project has been placed in Category I as defined in GM-CLA-2.

12. Reports: () Reports are to be required as provided for by "Revised Guide for the Submission of Research Proposals" dated February 8, 1954.

() Special Reports Instructions are as follows:

- Enclosures: () "A" - Proposal, dated _____
- () "B" - Notification letter, dated _____
- () "C" - Other correspondence, _____ letters

Distribution:

Addressee: Original (w encl.) Division File: Yellow Copy (w encl.)
1st Copy (w encl.) Pink Copy (w/o encl.)
2nd Copy (w encl.)

Program Analysis Branch File: White Copy (w encl.)
Branch: White Copy (w/o encl.)

GPO 878782

MEDICAL COLLEGE OF GEORGIA
AUGUSTA, GEORGIA

DEPARTMENT OF PHYSIOLOGY

December 8, 1954

Dr. C. S. Shoup
Chief, Biology Branch
Research and Medicine Division
United States Atomic Energy Commission
Oak Ridge, Tennessee

CR:JHR

Dear Dr. Shoup:

*W-3410
JHR
11-15*

Our answer to your letter of November 12th was delayed due to my absence during that month. Enclosed are copies of a total cost budget.

The partition of time between this research and other researches, teaching, patient care, and administrative duties, is purely guess work. It could be approximated if we could tell now how many patients will be available during the next few months and how long it will take us to make up our minds as to the validity of the approach. Such a guess could be Hamilton, Sr., Hamilton, Jr., Ellison (R. G.), 5-10 percent of time; Callaher, 10-20 percent; Ellison (Lois), and Smith (D.), 75 percent of time. (L. Ellison at home one half of the time.)

The date of the beginning of the research was May 1, 1954, about the time I began the present negotiations. Since that time, several hundred dollars have gone into radioactive materials. Clinical results have been better than we had hoped and our ideas as to the respiratory mechanisms are beginning to take shape.

This points up the fact that we would like the grant to begin as of May 1, 1954 and to continue until September 1, 1955. At this time, a progress report will be made and we will probably request a renewal on a financial basis which is at present hard to foresee in detail. If a retro-active grant is not possible, we would, of course, be glad to accept one beginning at a later date.

Yours truly,

W. F. Hamilton

W. F. Hamilton

WFH:jd
Enclo.

*22
218*

1097977

DEC 10 1954
D-6216

10. Budget

<u>Salaries</u>	<u>Total</u>	<u>College</u>	<u>USPHS¹</u>	<u>USAEC</u>
Hamilton, William F., Sr. ²	8,925.00	8,500.00		
Gallaher, B. Shannon ²	6,300.00	6,000.00		
Ellison, Lois ²	2,500.00		2,400.00	
Ellison, Robert ²	6,527.00	2,100.00	4,000.00	
Smith, Dorothy ³	2,550.00	1,800.00	700.00	
<u>Supplies</u>				
Chemicals	300.00		300.00	
Glassware	300.00		300.00	
Radioactive Material	2,645.00			2,645.00
<u>Services</u>				
Secretarial	100.00	100.00		
Janitorial	75.00	75.00		
Laundry	50.00	50.00		
Utilities	312.00			4212.00
<u>Space Occupancy</u>				
1 laboratory, 300 sq. ft. at \$2.50	750.00	750.00		
1 work room, 160 sq. ft. at \$2.50	405.00	405.00		
<u>Travel</u>				
<u>Total</u>	<u>31,307.00</u>	<u>19,830.00</u>	<u>7,700.00</u>	<u>2,857.00</u>

1. Funds from the U. S. Public Health Service under direction of Dr. W. F. Hamilton, Senior, Department of Physiology
2. Amounts include retirement costs paid by University System of State of Georgia
3. Amounts include Social Security Costs paid by the Medical College of Georgia
4. Eight per cent of funds requested to cover overhead

11. Amount Requested

Funds from the Medical College of Georgia	21,250.00
Funds from the U. S. Public Health Service	7,700.00
Funds from the U. S. Atomic Energy Commission	2,857.00

W.F.H.

DEC 10 1952

D-6216

1097978

1. Title

Investigation of the results of treating crippling emphysema with I^{131} .

2. Institution

Departments of Physiology, Radiology, Medicine and Thoracic Surgery, Medical College of Georgia.

Summary:

This is a cooperative research between the above departments to see whether administration of I^{131} will lessen the oxygen demand by the tissues of emphysematous patients in sufficient degree to make them more comfortable and useful and perhaps to postpone their inevitable exitus and to evaluate prognosis from clinical and laboratory tests.

Signatures


H. B. O'Rear, Dean


W. F. Hamilton, Responsible Investigator

3 and 4. Scientific Background and Scope of Proposed Research.

The hypothesis being tested is that since radioactive iodine ameliorates the distress and lessens the disability of various types of heart failure patients, the same result can be expected in cases of crippling emphysema. In both diseases the difficulty is in supplying the tissues with oxygen. In one, the handicap is inadequate cardiac pumping; in the other, the handicap is inadequate pulmonary ventilation. In both diseases palliative amelioration of symptoms may be expected, but no change in the fundamental disease process.

The hypothesis has been tested in several clinical trials, successful, unsuccessful, and intermediate. In the successful cases the patient was restored to activity and useful work. In the intermediate cases there was some palliation but no substantial improvement. The unsuccessful cases were unaffected by the treatment.

The results were promising enough so that the above departments decided to cooperate in investigating chemical, respiratory and physiological mechanisms involved in the response to I¹³¹. In doing this we will 1) get a thorough clinical evaluation of the patient; 2) estimate the ventilatory function by such tests as maximum breathing capacity, timed vital capacity residual air, pulmonary mixing and 3) evaluate pulmonary diffusion by measuring O₂ tensions and saturation, alveolar arterial gradient at rest and during mild exercise. This careful evaluation will be done periodically during the course of treatment in the hope that criteria can be set up to arrive at a differential prognosis as to the effect of the treatment on the disease.

5. Scientific Personnel

W. F. Hamilton, Ph. D., Professor of Physiology, responsible investigator, will spend a few hours a week in consultation and criticism of the project as it develops. He has spent his life in cardiovascular research. The last five of his publications are below:

Ellison, R. G., R. C. Major, R. W. Pickering, and W. F. Hamilton
"Further Experiences with a Technique of Producing Mitral Stenosis of a
Controlled Degree". Surgical Forum of the Amer. College of Surgeons, 1952.

Hamilton, W. F. "The Lewis A. Conner Memorial Lecture - The Physiology
of the Cardiac Output" Circ. 5, 527, 1953.

Howard, A. R., W. F. Hamilton and P. Dew. "Limitations of the Continuous
Infusion Method for Measuring Cardiac Output by Dye Dilution." A. J. P. 175:
173, 1953.

Hamilton, W. F. "The Physiology of Congestive Failure of the Circulation"
Minnesota Medicine 37: 105, 1954.

Hamilton, W. F., R. G. Ellison, R. W. Pickering, E. E. Hague and J. T. Rusker
"Hemodynamic and Endocrine Responses to Experimental Mitral Stenosis".
A. J. P. 176: 445, 1954.

Lois T. Ellison, M.D., Research Associate in Physiology, in charge of
Laboratory testing.

R. G. Ellison, M.D., Assistant Research Professor of Physiology, consultant
to Dr. Lois Ellison.

B. Shannon Gallaher, M.D., Assistant Professor of Medicine, in charge of
clinical evaluation. Will consult with V. P. Sydenstricker and Thomas Finley.

W. F. Hamilton, Jr., M.D., Board Radiologist trained at Oak Ridge to
administer isotopes, in regular receipt of isotopes (Partner in Holmes and Brown,
Radiologists). He initiated the project and followed the first clinical cases,
He will consult Drs. Holmes and Brown.

6. Other Personnel

A technician is available and the house staff in Medicine and Radiology are
cooperating.

7. Other Financial Assistance

The salaries of the above personnel are being paid either by the school or
by unrestricted research grants. It is hard to estimate the value of these
salaries or the equipment furnished by the school.

8. Materials, Equipment, and Facilities

The Cardiopulmonary Laboratory is equipped with apparatus to make the tests
mentioned above. It is a joint project of the Physiology and Thoracic Surgery
departments. The Radiology Department is equipped to make tracer test to

evaluate the thyroid uptake of I^{131} and to administer it in controlled dosage for treatment.

9. Travel

No allowance.

10. Budget

We will need a tracer vial for each visit - 2 or 3 per week including reexaminations at \$5.00 each or \$125.00. We hope to process 50 patients during the year. Holmes and Brown estimate that I^{131} costs them \$1.31 per millicurie F.O.B. Augusta. The average patient will get 25 mc per dose and some of them two doses - say 40 mc per patient or \$2520.00. Thus:

Tracer material	\$125.00
Treatment material	<u>2520.00</u>
Subtotal	2645.00
8% overhead	<u>211.60</u>
Total	2856.60

Costs born by school substantial but hard to evaluate.