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UNITED STATES  
ATOMIC ENERGY COMMISSION

OAK RIDGE OPERATIONS  
P. O. BOX E  
OAK RIDGE, TENNESSEE 37830

REGISTRY *Oak Ridge Operations*  
COLLECTION *Records Holding Area Documents 1944-1994*  
BOX No. *A-59-3 Bldg. 2714-H*  
FOLDER *Cont 3734 CA*  
*Univ. of Miami 3-19-70*

MAR 19 1970

Ralph Elson, Director, Contract Division

REQUEST FOR CONTRACT ACTION

It is requested that you take the necessary steps to process the following described contract action (CA):

1. Nature of Action Requested:

- Selection of New Contractor and/or Negotiation of Contract  
Number:  
Contractor:
- Modification of Contract  
Number: AT-(40-1)-3734  
Contractor: University of Miami

2. Nature of Services To Be Covered by Contract: Research

Title: EVALUATION OF THE ABSORBED DOSE FROM THE DIAGNOSTIC USE  
OF RADIOPHARMACEUTICALS

3. Type of Contract:

- Support Agreement
- Cost Type
- Other

4. Amount of AEC Funds To Be Obligated by This CA: \$35,930

5. AEC Percentage of Est. Total Cost To Be Shown by This CA: 91

6. Description of Other Changes To Be Covered by This CA:

Modify contract to provide for the performance of additional research to be completed during the period 10-15-69 - 10-14-70. The AEC support ceiling for the extended period is \$35,930. Title to equipment shall vest in the contractor under authority of PL 85-934.

7. Authority:

Z 1786 Form AEC-481 (CA) fr J. R. Totter  
dtd 3-2-70.

OLE: LM

*Herman M. Roth*  
Herman M. Roth, Director

Laboratory and University Division 3/19/70  
OLA  
CS Skout

CONTRACTS-3734

C.A.

1033844

## APPENDIX "A"

For the Contract Period October 15, 1969 through October 14, 1970.

A-I RESEARCH TO BE PERFORMED BY CONTRACTOR

The Contractor will continue studies on the absorbed dose from diagnostic use of radiopharmaceuticals, and development of data for the calculations involved, tissue distribution of the radio-nuclide incorporated into the radiopharmaceutical as studied in vivo, and activity concentration in tissues and body fluids. Physical parameters required will be experimentally determined and correlated with theoretical values. New pharmaceuticals will be compared with those in current use, and interrelations of the radiopharmaceuticals, radionuclides and organ visulation system on resultant absorbed dose to a patient having a clinical study versus the clinical information that may be obtained from this study will be evaluated.

The Principal Investigator expects to devote approximately 15% of his time or effort to the work.

A-II WAYS AND MEANS OF PERFORMANCE(a) Items Included in Total Estimated Cost:

(1) Salaries and Wages: \$15,200.00

Dr. E. M. Smith, Principal Investigator  
2 Research Associates  
Radiopharmacist  
Systems Programmer  
Research Technologist

(2) Employee Benefits: 1,142.00

(3) Materials and Supplies: 5,200.00

Radionuclides, radiopharmaceuticals,  
glassware, chemicals, thermoluminescent  
dosimetry material, phantom material,  
electronic components, and reference  
materials.

(4) Equipment: 5,100.00

Film densitometer, micromanipulators,  
collimators, and nuclear instrumentation



PUBLICATION BY AEC AUTHORIZED

NOTICE OF RESEARCH PROJECT SCIENCE INFORMATION EXCHANGE SMITHSONIAN INSTITUTION

U.S. ATOMIC ENERGY COMMISSION

SIE NO.

AEC CONTRACT NO.

AT-(40-1)-3734

SUPPORTING DIV. OR OFFICE:

NAME & ADDRESS OF CONTRACTOR OR INSTITUTION: (State the division, department, or professional school, medical, graduate or other, with which this project should be identified.)

Division of Nuclear Medicine; Department of Radiology; University of Miami School of Medicine; Miami, Florida

TITLE OF PROJECT:

EVALUATION OF THE ABSORBED DOSE FROM THE DIAGNOSTIC USE OF RADIOPHARMACEUTICALS

NAMES, DEPARTMENT, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATORS AND OTHER PROFESSIONAL SCIENTIFIC PERSONNEL: (not including graduate students) engaged on the project, and fraction of man-year devoted to the project by each person.

Edward M. Smith, D.Sc., Asst. Prof. of Radiology 15 per cent
Albert J. Gilson, M.D., Assoc. Prof. of Radiology 20 per cent
Peter J. Kenny, M.S., Asst. Prof. of Radiology 25 per cent
Homer B. Hupf, Ph.D., Asst. Prof. of Radiology 20 per cent
Pablo Larrea, B.S., Research Assoc. 10 per cent

NO. OF GRADUATE STUDENTS ON PROJECT: NO. OF GRADUATE STUDENT MAN-YEARS:

SUMMARY OF PROPOSED WORK: (200-300 words, omit Confidential Data). Summaries are exchanged with government and private agencies supporting research, are supplied to investigators upon request, and may be published in AEC documents. Make summaries substantive, giving initially and for each annual revision the following: OBJECTIVE; SCIENTIFIC BACKGROUND FOR STUDY; PROPOSED PROCEDURE; TEST OBJECTS AND AGENTS.

The evaluation of the absorbed dose received by a patient resulting from a diagnostic procedure employing a radiopharmaceutical is essential if the maximum benefit is to be derived by the patient. To obtain the necessary data to calculate the absorbed dose, the tissue distribution of the radionuclide incorporated into the radiopharmaceutical will be studied "in vivo", and the activity concentration in tissue specimens and body fluids will be measured. The physical parameters required for absorbed dose calculations will be experimentally determined, and correlated with theoretically calculated values. The results of these investigations will yield a reliable estimate of the absorbed dose received by various body tissues from new radiopharmaceuticals as they are introduced into use, as well as from the routine radiopharmaceuticals in current use. In addition, the interrelationship of the radiopharmaceuticals, radionuclides and organ visualization system on the resultant absorbed dose to a patient having a clinical study versus the clinical information that may be obtained from this study is being evaluated.

RESULTS TO DATE:

Table with 2 columns: BUDGET (PRIMARY, SECONDARY) and PROGRAM CATEGORY NO.

Signature of Principal Investigator: Edward M. Smith, D.Sc. DATE: 2/4/65

INVESTIGATOR - DO NOT USE THIS SPACE

1033847

UNIVERSITY OF MIAMI  
Coral Gables, Fla.

U.S. Atomic Energy Commission Research and Development Division  
Post Office Box E, Oak Ridge, Tennessee

Period 10/15/68 - 10/14/69

FINANCIAL STATEMENT - Contract AEC AT 40-1-3734 Modification 1

Budget	Expenditures thru 7/31/69	Estimated Expenditures thru 10/14/69	Total Estimated Expenditures	Estimated Balance 10/14/69
Salaries & Wages	\$ 20,800.00	\$ 10,333.00	18,858.00	\$ 1,942.00
Employee Benefits	2,172.00	914.00	1,777.00	4,385.00
Materials and Supplies	7,200.00	2,730.00	3,000.00	4,200.00
Equipment	3,500.00	12,394.00	14,300.00	(10,800.00)
Publications & Comm.	500.00	40.00	250.00	250.00
Travel	500.00	344.00	500.00	00
Other	2,000.00	791.00	1,000.00	1,000.00
Services	2,600.00	507.00	1,100.00	1,500.00
Overhead (49%-S&W)	10,753.00	4,177.00	9,240.00	1,513.00
<b>Total Estimated Project Cost</b>	<b>\$ 50,025.00</b>	<b>\$ 32,602.00</b>	<b>\$ 50,025.00</b>	<b>\$ 00</b>

University of Miami 28% \$ 14,095.00  
AEC 72% \$ 35,930.00

Justification and Description of Items in Third Year Budget

1. Film Densitometer and Micromanipulators - These items of equipment will be used in the measurement of the modulation transfer function, and are not available in our laboratory.
2. Collimators - The 14 collimators will be used on the Multifunction Digital Research Scanning System. These will be specially designed for this system to perform the isoresponse (constant response through a patient) total body distribution studies.
3. Subjects for study and travel for subjects:

This item in our budget is so that we may reimburse subjects who participate in our body distribution studies for their expenses as well as provide them with a small honorarium. It is anticipated that these subjects will spend one to three days on the Metabolic Ward of the National Children's Cardiac Hospital.

2. Supplies

a. Radionuclides and radiopharmaceuticals	\$1,300	-0-
b. Glassware and Chemical Supplies	\$ 500	-0-
c. Thermoluminescent Dosimetry Material	\$1,200	-0-
d. Phantom Material	\$1,000	-0-
e. Electronic Components	\$1,000	-0-
f. Office Supplies, Reference Materials, etc.	\$ 200	-0-
Total	\$5,200	-0-

3. Equipment

Film Densitometer and Micromanipulators	\$1,000	-0-
Collimators	\$2,100	-0-
Nuclear Instrumentation	-0-	\$2,000
	\$3,100	\$2,000

4. Publications and Communications

\$ 750 -0-

5. Travel

\$ 750 -0-

6. Other

Computer time	\$2,000	-0-
Subjects for Study and Travel for Subjects (20 at \$100)	\$2,000	-0-
	\$4,000	\$2,000

Total Direct Costs

\$30,142 \$2,000

7. Indirect Cost at 4.6% \*\* salaries/retirement:

7,377  
7,850 -0-

Total Project Costs

\$38,000 \$2,000

Second year funding AEC funds requested  
Univ. of Miami contribution

37,519  
\$38,000 (95%)  
2,000 (5%)

\*\* University of Miami Medical School at 4.6% salaries - DCAA Provisional

\$40,000 (100%) 39,519

RENEWAL RESEARCH PROPOSAL

for

EVALUATION OF THE ABSORBED DOSE FROM THE  
DIAGNOSTIC USE OF RADIOPHARMACEUTICALS

Submitted to

U. S. Atomic Energy Commission

Washington, D. C.

Proposed by

Edward M. Smith, D.Sc.

Division of Nuclear Medicine, Department of Radiology  
University of Miami School of Medicine; Miami, Florida

August 1, 1969

Authentication

9/17/69

Date

Eugene E. Cohen

Eugene E. Cohen

Vice-President for Financial Affairs  
and Treasurer, University of Miami

8/6/69

Date

Edward M. Smith, D.Sc.

Edward M. Smith, D.Sc.

Assistant Professor of Radiology  
University of Miami School of Medicine

The investigations encompassed by this application have been or will be approved by the Committee of Associates of the Investigator(s) in accordance with this institution's assurance on clinical research dated October 24, 1966.

THIS COPY  
NO INVENTION  
TO THE A.E.C.

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9/24/69

1. Title of Project

Evaluation of the Absorbed Dose from the Diagnostic Use of Radiopharmaceuticals.

2. Institution3. Project Abstract:

The evaluation of the absorbed dose received by a patient resulting from a diagnostic procedure employing a radiopharmaceutical is essential if the maximum benefit is to be derived by the patient. Even when the most sensitive and sophisticated instrumentation is used, the quantity of activity administered to the patient limits the quality of the diagnostic information extractable from the study. To obtain the necessary data to calculate the absorbed dose, the tissue distribution of the radionuclide incorporated into the radiopharmaceutical will be studied "in vivo", and the activity concentration in tissue specimens and body fluids will be measured. The physical parameters required for absorbed dose calculations will be experimentally determined, and correlated with theoretically calculated values. The results of these investigations will yield a reliable estimate of the absorbed dose received by various body tissues from new radiopharmaceuticals as they are introduced into use, as well as from the routine radiopharmaceuticals in current use. In addition, the interrelationship of the radiopharmaceuticals, radionuclides and organ visualization system on the resultant absorbed dose to a patient having a clinical study versus the clinical information that may be obtained from this study is being evaluated. These types of studies are essential if a given rad dose to a patient is to have any meaningful significance.

4. Scientific Background

The scientific background for this renewal research proposal was presented in the original research proposal dated December 1, 1966.

5. Scientific Scope

## A. Objectives

- (1) The collection of clinical data yielding information on the tissue distribution with respect to time of the radionuclide incorporated into the radiopharmaceutical under study.

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- (2) Experimental verification of the physical parameters such as absorbed fractions and energy buildup factors required in the absorbed dose calculations.
- (3) The actual absorbed dose calculations and the dissemination of the calculated values for the absorbed dose.
- (4) Investigations on the interrelationship of radiopharmaceuticals, radionuclides and organ visualization systems on the resultant absorbed dose to a patient having a clinical study versus the clinical information that may be obtained from this study.

B. Relationship of proposed research to present knowledge and comparable work in progress elsewhere

This material was presented in the original research proposal dated December 1, 1966.

C. General Plan for the Work

The outlined presented in this section is for the third year of this project.

- (1) Radiopharmaceuticals to be studied
  - (a) Work will be completed on the radiopharmaceuticals outlined in the -01 and -02 year of this research proposal
  - (b) The tissue distribution data for Hippuran labeled with Iodine-123 and I-131 will be collected. In addition, the literature will be searched for any information on this radiopharmaceutical.
- (2) Collection of tissue distribution data

The methods to be employed in the collection of tissue distribution data were presented in the original research proposal dated December 1, 1966. These methods will be varied as required for the particular radiopharmaceutical under study

- (3) Experimental determination of physical parameters required in absorbed dose calculations

The methods to be employed in these studies were described in our original research proposal. In addition, we will study the potential use of the thermoluminescent material  $\text{CaSO}_4(\text{Dy})$ . This material may prove sufficiently useful in the dosimetry of high energy ( $> 200$  keV) photon emitters since it should have increased sensitivity over Lithium fluoride.

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- (4) Comparison of the absorbed dose versus the information content of a clinical study

This work was initiated during the first year of our contract and we are continuing along these original lines, however, we are incorporating an additional parameter, the system modulation transfer system. This will be determined by computing the modulation transfer function for the total system using the film densitometry method as described by Mozley (Mozley, J.M.: Quantitative Comparison of Radioisotopes Scanning and Scanners in Brain Tumor Imaging-Effects of Modulation Transfer Cuntion and Quantum Fluctuation. J. Nuc. Med. 10:359 (1969).

6. Scientific Personnel

- A. Edward M. Smith, D.Sc., Principal Investigator

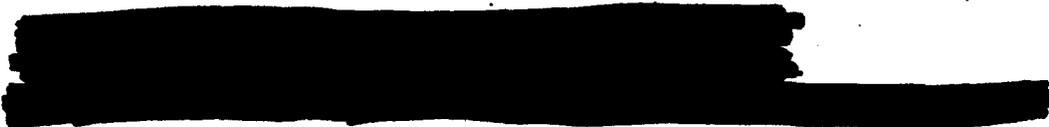
This information was provided in the original research proposal dated December 1, 1966. A minimum of 15 per cent of Dr. Smith's time will be devoted to this project.

- B. Albert J. Gilson, M.D., Co-Investigator

This information was provided along with my letter dated May 15, 1967, to Dr. Robert Wood. A minimum of 20 per cent of Dr. Gilson's time will be devoted to this project.

- C. Peter J. Kenny, Co-Investigator

Education



Professional Experience:

1. Department of Posts and Telegraphs; Dublin, Ireland (1952-1953); Communications Engineer
2. Department of Industry and Commerce, Dublin, Ireland (1953-54) Meteriological Officer.
3. St. Anne's Hospital, Dublin, Ireland (1953-1958) Physicist
4. University College, Dublin, Ireland (1955-1958) Lecturer in Radiological Physics.
5. Sloan-Kettering Institute for Cancer Research, New York, (1958-1961) Research Assistant

Professional Experience - Kenny - (continued)

- 6. Sloan-Kettering Institute, New York, New York (1958-1961)  
Research Associate in Biophysics.
- 7. Cornell University Medical College Graduate School (1961-1969)  
Instructor in Biophysics
- 8. University of Miami School of Medicine, Miami, Florida (1969-)  
Assistant Professor of Radiology, Division of Nuclear Medicine

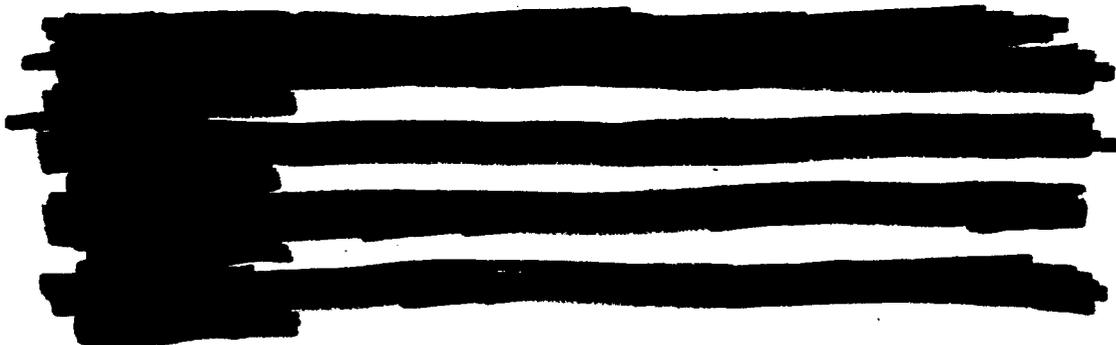
Publications

Twenty-six publications in quantitative organ visualization, metabolic studies and other related areas in Nuclear Medicine.

A minimum of 25 per cent of Peter Kenny's time will be devoted to this project.

D. Homer B. Hupf, Ph. D., Radiopharmacist

Education



Professional Experience

- 1. Abbott Laboratories (June, 1955 - September, 1957)  
Sales Representative
- 2. Abbott Radiopharmaceutical Division (June, 1959 - June, 1965)
- 3. Oak Ridge National Laboratory (June, 1965 - July, 1969)  
Research Radiochemist
- 4. University of Miami School of Medicine; Miami, Florida  
(1969-) Assistant Professor of Radiology

A minimum of 20 per cent of Homer Hupf's time will be devoted to this project.

7. Other Personnel

- A. Pablo Larrea, B.S., Systems Programmer. This individual will devote 10 per cent of his time to this project in the area of programming and data processing.
- B. Bea Weaver, B.S., Research Technologist. This individual will devote 100 per cent of her time to this project.
- C. Marcine Parker, Medical Secretary. This individual will devote 25 per cent of her time to this project.

8. Other Financial Assistance

In addition to U.S.A.E.C. funds, the personnel involved in this project will be supported by University of Miami, Mount Sinai Hospital or Dade County funds.

9. Premises, Facilities, Equipment and Materials to be Furnished by the Contractor

The facilities and equipment described in the original research proposal are still in use. Additional equipment and facilities have been made available to us at Mount Sinai Hospital, which is a University affiliated hospital. These facilities include an Anger Camera which will be connected on a real-time basis to a 2116B Hewlett-Packard computer as well as additional clinical and research laboratory space.

AEC Contract No. AT-(40-1) 3734  
Dr. Edward M. Smith, Radiology  
University of Miami  
10/15/69 - 10/14/70

10. Budget

1. Salaries and Wages

Name	Position	Per Cent of Effort Funded	Requested from AEC	University of Miami Contribution
a. Edward M. Smith, D.Sc. Asst. Prof. of Radilogy	Principal Investigator	15	\$3,000	-0-
b. Albert J. Gilson, M.D. Assoc. Prof. of Radiology Dir., Div. of Nuc. Medicine	Co- Investigator		-0-	-0-
c. Peter J. Kenny, M.S. Asst. Prof. of Radiology	Co- Investigator	25	\$5,000*	-0-
d. Homer B. Hupf, Ph.D. Asst. Prof. of Radiology	Radiopharmacist	20	\$1,700*	-0-
Pablo A. Larrea, B.S.	Systems Programmer	10	\$1,500	-0-
f. Bea Weaver, B.S.	Research Technologist	100	\$4,000	-0-
g. Retirement at 5.5%			\$ 836	

Total \$16,036 -0-

Employee Benefits

F.H.C.A. (4.8 )	272
*Group Insurance (0.7 )	84
	<u>306</u>

UNIVERSITY OF MIAMI  
CORAL GABLES, FLORIDA 33124

RESEARCH ACCOUNTING  
P. O. BOX 8153

September 19, 1969

Mr. C. S. Shoup  
Chief, Research Contracts Branch  
Laboratory and University Division  
United States Atomic Energy Commission  
Oak Ridge, Tennessee 37830

Subject: Proposal for renewal of  
AEC AT-(40-1) 3734,  
Dr. E. M. Smith, Principal  
Investigator

Dear Mr. Shoup:

Attached you will find the original and four (4) copies of the subject proposal submitted by this office on behalf of Dr. Edward M. Smith. Included with the proposal are:

- 1) Financial Statement reflecting status of current funding
- 2) Notice of Research Project (SI-SIE-78A)

The renewal proposal is submitted via the Office of Research Accounting so that I may invite your attention to the University of Miami's revised cost sharing contribution which will be 5% of the total project cost in lieu of the 28% provided during the current year funding. You will note, however, under "Scientific Personnel" of Dr. Smith's proposal that while the personnel engaged in the research will continue to devote their current percentage of effort, their salary support is such that the University's contribution is more realistically presented at the 5% level shown in the attached proposal.

Sincerely,

  
G. B. Ullman  
Research Accountant

CDU/gp

cc: Dr. E. M. Smith  
Mr. D. Bishop

SEP 22 1969

CONTRACTS-3734  
A 9321 (Miami)  
SEP 22 1969

1033858



UNITED STATES  
ATOMIC ENERGY COMMISSION

OAK RIDGE OPERATIONS  
P.O. BOX E  
OAK RIDGE, TENNESSEE 37830

AREA CODE 615  
TELEPHONE 493-5000

September 26, 1969

John R. Totter, Director, Division of Biology & Medicine, HQ

RENEWAL OF CONTRACT NO. AT-(40-1)-3734 WITH UNIVERSITY OF MIAMI  
SCHOOL OF MEDICINE

We are submitting for your review and appropriate action the following information concerning the contract which will expire on October 14, 1969

- 1. Renewal Proposal (3)
- 2. Progress Report (3)
- 3. Financial Statement (3)
- 4. 200-Word Summary (3)

We shall appreciate your advising us of your decision so that we may proceed with the necessary contract action at the earliest possible date.

Herman M. Roth, Director  
Laboratory and University Division  
Oak Ridge Operations

OLE:LN

Enclosures:  
As Listed Above

BC: Alice Brown  
D. S. Zachry, w/cy Progress Report  
C. S. Shoup, w/cy encls.

*Medley*

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Adm. Ser. Br.  
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Medley:erb  
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September 26, 1969  
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CONTRACTS-3734 (mlan)

1033859

February 5, 1970

Robert W. Wood, Ph.D.  
Radiological Physics and Instrumentation  
Division of Biology and Medicine  
U.S. Atomic Energy Commission  
Washington, D.C.

Dear Bob:

Enclosed, find a copy of the Progress Report for my AEC contract AT-(40-1)-3734. I am also enclosing copies of reprints of two articles that were published during the second year of our contract. In addition, I am enclosing four additional pre-publication copies of articles that we have and are submitting. The three articles on Thermoluminescent Dosimetry are in preliminary stages so please forgive me for any poor english and possibilities of misinterpretation of the results.

I am sorry for the long delay in getting these progress reports in and I appreciate your patience. I promise that this will not happen again in the future.

Best regards.

Sincerely yours,

*EMW*  
Edward M. Smith, D.Sc.  
Assistant Professor of Radiology  
Assistant Director Division of Nuclear Medicine

EMS/nl  
cc: Mr. C.S. Shoup  
Mr. C.D. Ullman

CONTRACTS -3734 (7/1/41)

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FEB 9 1970

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XX

USAEC  
C. S. SHOUP, CHIEF  
RES. CONT. BR.  
LAB. AND UNIV. DIV.  
OAK RIDGE, TENNESSEE

ORIGINAL SIGNED BY  
C. S. SHOUP

C. S. SHOUP, CHIEF

MAR 6 1970

DR. EDWARD M. SMITH, DEPT. OF RADIOLOGY, SCHOOL OF MEDICINE, UNIVERSITY OF MIAMI,  
POST OFFICE BOX 875, BISCAYNE ANNEX, MIAMI, FLORIDA

INFO: E. H. MAN, COORDINATOR OF RESEARCH, UNIVERSITY OF MIAMI, MIAMI, FLORIDA

WE HAVE AUTHORIZATION TO EXTEND CONTRACT NO. AT-(40-1)-3734 THROUGH OCTOBER 14,  
1970, WITH \$35,930 AEC SUPPORT CEILING. PLEASE ADVISE WHETHER UNIV. IS WILLING  
TO ACCEPT \$35,930 AEC SUPPORT TO \$40,000 TOTAL PROJECT COST. IF NOT ACCEPTABLE,  
PLEASE SUBMIT REVISED BUDGET ASAP BASED ON APPROVED FINANCING. OVERHEAD RATE  
SHOULD BE BASED ON 46% OF SALARIES AND WAGES. INFORMATION SUBMITTED SHOULD BE  
ENDORSED BY APPROPRIATE ADMINISTRATIVE OFFICIAL OF UNIV.

CERTIFIED EXPENDITURE STATEMENT FOR PERIODS ENDED OCT. 14, 1968, AND OCT. 14,  
1969 UNDER CONTRACT NO. AT-(40-1)-3734 NOT RECEIVED. SEE APPENDIX "C" TO CON-  
TRACT. STATEMENTS NEEDED ASAP TO MAKE ANY REQUIRED FINANCIAL ADJUSTMENTS FOR  
PRIOR PERIODS AND MAKE CONCLUDING PAYMENTS FOR THOSE PERIODS. OLE:LM - 33

1033861

Z 1530

RECEIVED  
ORO/AEC  
TELETYPE SECTION  
MAR 6 4 53 PM '70

OFFICE	Adm. Ser. Br.	Res. Cont. Br.			
SURNAME	<i>Medley</i>	<i>C. S. Shoup</i>			
DATE	3-6-70	<i>3/6/70</i>		CONTRACTS	

-3734 (Miami)

RECEIVED  
AEC

January 5, 1970

Edward M. Smith, Sc. D.  
Department of Radiology  
Division of Nuclear Medicine  
University of Miami  
Miami, Florida 33182

AEC CONTRACT NUMBER AT-(40-1)-3734.

Dear Dr. Smith:

Reference is made to our phone conversations and to the letter from G. D. Ullman, Research Accountant, dated September 19, 1969, sending us your renewal proposal.

I have been on the phone with Dr. Robert Wood at the Division of Biology and Medicine, Headquarters, and he and I have both been awaiting your Progress Report to be forwarded here so that it can be incorporated with the proposal for action by the Research Committee of DBM.

Since the contract period expired on October 14, 1969, I feel that you should submit the Progress Report just as soon as you can if you yet plan on DBM considering additional support at this late date.

Sincerely,

ORIGINAL SIGNED BY  
C. S. SHOUP

C. S. Shoup, Chief  
Research Contracts Branch  
Oak Ridge Operations

OLA:CSS

CC: R. W. Wood, HQ  
G. D. Ullman, Miami

OAK RIDGE OPERATIONS  
RECEIVED

JAN 8 3 37 PM '70

Z 39

DISPATCHED

CONTRACTS-3734 (Miami)

1033862

OFFICE ▶	Res. Con. Br.				
SURNAME ▶	CSShoup Shoup:ef				
DATE ▶	1/5/70				

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ORO-AEC  
TELETYPE SECTION  
MAR 10 4 49 PM '70  
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419P EST MAR 10 70 CTA254

SSE322 CT CCB456 (AT 069CC207456)PD UOFMIAMI CGBL 0351P

EST03/10/70

ZCZC 042 PAID CORAL GABLES FLORIDA MARCH 10 1545EST

C S SHOUP

U S ATOMIC ENERGY COMMISSION

OAK RIDGE TENN

BT

REF OLE - LM - 33 - CONTRACT NO AT-(40-1)3734 AEC SUPPORT CEILING

\$3<sup>5</sup>,930 ACCEPTABLE TO UNIVERSITY OF MIAMI CERTIFIED

EXPENDITURE STATEMENT FORTH COMING NOT LATER THAN 20 MARCH 1970

EUGENE E COHEN

VICE PRESIDENT FOR FINANCIAL AFFAIRS AND TREASURER

UNIV OF MIAMI CORAL GABLES FLORIDA

B 1981  
MAR 11 1970

CONTRACTS-3734(*miami*)

1033863

MAR 19 1970

Dr. Edward M. Smith,  
Department of Radiology  
University of Miami  
Miami, Florida 33152

CONTRACT NO. AT-(40-1)-3734

Dear Dr. Smith:

We have initiated action for the preparation of a modification to Contract No. AT-(40-1)-3734 to provide for the performance of additional research to be completed during the period October 15, 1969 through October 14, 1970. The AEC has approved a support ceiling for the extended period in an amount not to exceed \$35,930 in new funds. The contract modification will be forwarded to the University for review and appropriate signature as soon as it is complete.

In accordance with the provisions of Article B-XI of Appendix "B" to the contract, the concluding payment for the period ended October 14, 1969, will be made upon submission of a certified expenditure statement following the format set forth in the Appendix "C" to the contract. A voucher should accompany the statement to cover the remaining cost chargeable to the AEC.

Sincerely,

ORIGINAL SIGNED BY  
C. S. SHOUP

C. S. Shoup, Chief  
Research Contracts Branch  
Laboratory and University Division

OLE:LM

CC: E. H. Man, U. of Miami

Z 1785

CONTRACTS-3734 (Miami)

OFFICE ▶	Adm. Ser. Br.	Res. Cont. Br.			
SURNAME ▶	<i>Medley</i> MEDLEY:slc	<i>CSShoup</i>			
DATE ▶	3-18-70	3-19-70			

1033864

(5) <u>Travel:</u>	\$ 750.00
(6) <u>Publications and Communications:</u>	750.00
(7) <u>Computer Time:</u>	2,000.00
(8) <u>Expenses for Participants in Body Distribution Studies:</u>	2,000.00
(9) <u>Indirect Cost</u> (Fixed at 46% of Salaries and Wages plus Retirement):	7,377.00

(b) Items, if any, Significant to the Performance of this Contract, but Excluded from Computation of Support Cost and from Consideration in Proportioning Costs:

- (1) Items to be Contributed by the Contractor:  
None
- (2) Items to be Contributed by the Government:  
None

(c) Time or Effort of Principal Investigator(s) Contributed by Contractor, but Excluded from Computation of Support Cost and from Consideration in Proportioning Costs:

None under this paragraph

A-III The total estimated cost of items under A-II (a) above for the contract period stated in this Appendix "A" is \$39,519.00; the Commission will pay 91% of the actual costs of these items incurred during the contract period stated in this Appendix "A", subject to the provisions of Article III and Article B-XXVII. The estimated AEC support cost for the contract period stated in this Appendix "A" is \$35,930.00.

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