13471

Box 2

Prepared by
Office of Exchange of Information, PHS
Not for Publication

3-19C

NOTICE OF RESEARCH PROJECT

Contracting Agency: Public Health Service

Proposal Number: _____ Date Received: 3/25/49

Project Number: ~~RG 1003~~(C) Date Approved: _____

Descriptive Title of Project: "The efficacy of nasopharyngeal irradiation in the prevention of deafness - cooperative field study in the prevention of deafness in The Johns Hopkins University School of Hygiene and Public Health and The Johns Hopkins University School of Medicine"

Principal Investigator: Dr. Samuel James Crowe, Adjunct Professor of Laryngology and Otology

Name of Institution: School of Hygiene and Public Health, The Johns Hopkins University

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	Grant No.	Period of Operation	Amt. App.
B/9	~~RG 1003~~	7/1/48 - 10/31/49	$35,019
	~~1003~~C1	11/1/49 - 10/31/50	20,433

Abstract by Principal Investigator when contract has been approved.

A survey has been completed in which 4,275 third grade school children were carefully examined, including audiometric testing in a soundproof booth and nasopharyngescropic examinations. Nineteen per cent of these children were found to have a hearing loss of 15 decibels or more for two or more test frequencies in one ear, or a hearing loss of 20 decibels or more for one test-frequency in one ear. Those children found to have such a significant hearing defect constitute a study group in which one-half selected by alternate case method will receive treatment by nasopharyngeal irradiation (50 mg., anhydrous radium sulphate for twelve minutes to each side of the nasopharynx). In order to assure no bias, a blank applicator of identical design was placed for twelve minutes in the nasopharynx of those children not irradiated. To insure objectivity on the examiner's part, the identity of the applicators was concealed so that only the directors of the study know which applicators contain the radium.

It is proposed to follow both the irradiated group and the control group for a period of five years to determine the efficacy of irradiation in the prevention of progressive deafness.

This information will be supplied to Federal Agencies to avoid unknowing duplication of this work.

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
B-19 C2
P.H.

CONTRACTING AGENCY: FEDERAL SECURITY AGENCY, PUBLIC HEALTH SERVICE

TITLE OF PROJECT:

Research project on the efficiency of nasopharyngeal irradiation in the prevention of deafness in children

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Samuel James Crowe, M.D., Adjunct Professor of Laryngology and Otology
John Earle Bordley, M.D., Associate Professor of Physiological Hygiene
William George Hardy, Ph.D., Associate Professor of Physiological Hygiene

NAME AND ADDRESS OF INSTITUTION:

School of Hygiene and Public Health, The Johns Hopkins University,
615 N. Wolfe Street, Baltimore 5, Md.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data)

In the Program of Exchange of Information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

A five-year study will undertake to determine the efficacy of nasopharyngeal irradiation at the public health level for the prevention of deafness in school children, and to determine the percapita cost of such treatment. The project is administered with the cooperation of the Baltimore City Departments of Health and Education. It is carried out by field-teams, who work in the schools.

Approximately 7,000 children, average age 8, were selected to provide a representative distribution. This group has been screened for hearing impairment and those screened, retested and given a full otologic examination, including nasopharyngoscopy. Approximately 10 percent of these screened are included in the study-group by the selected criteria of hearing loss. Half receives nasopharyngeal irradiation by the method of alternate selection, and composes the experimental group; the other half is treated with blank radium applicator, and composes the control group.

After treatment, the study-group is re-examined twice each year. Children whose symptoms warrant will be re-irradiated. In the fifth year the entire group of 7,000 children will be re-examined and the findings matched with those of the initial examination.

It is believed that this study will provide data for definite conclusions as to the preventive efficacy of this treatment and its cost at the public health level.

SIGNATURE OF PRINCIPAL INVESTIGATOR S. J. Crowe M.D.

PHS-166-1 (RG) REV. 6-49
FORM APPROVED
BUDGET BUREAU NO. 68-R403

REMOVE SMUDGE SHEET BEFORE TYPING
Replace smudge sheet when finished and return all copies to PHS.

APPLICANT — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
B-19	7/48 - 10/49	$35,019
19 C1	11/49 - 10/50	20,433
19 C2	11/50 - 10/51	17,772

Prepared for the Medical Sciences Information Exchange. Not for publication or publication reference without consent of the principal investigator.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

COPY

The efficacy of nasopharyngeal irradiation in [illegible] children

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

S. J. Crowe, M. D., Professor of Otology and Laryngology, Adjunct Professor of Environmental Medicine

J. E. Bordley, M. D., Associate Professor of Otology and Laryngology, and of Environmental Medicine

W. G. Hardy, Ph. D., Associate Professor of Otology and Laryngology, and of Environmental Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION

The Johns Hopkins University School of Medicine and School of Hygiene and Public Health, Baltimore 5, Maryland

SUMMARY OF PROPOSED WORK *(300 words or less – omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The purpose of this experiment is to show the feasibility of irradiation of the nasopharynx as a method for controlling hearing impairment in large groups of children associated with lymphoid hyperplasia in the nasopharynx; to draw conclusions concerning the percapita cost of such an undertaking as a public health measure. The procedure of treatment is not new, as an individual measure; this is the first adequately controlled experiment of sufficient size for accurate statistical analysis. Approximately 7,000 children of relatively the same age were surveyed by otologic and audiometric examinations to select those whose hearing impairment warranted radium treatment. This group was placed under intensive study and half the group treated with radium; they are re-examined twice each year. In the fifth year the entire group of 7,000 will be re-surveyed to evaluate the efficiency of modern diagnostic techniques in determining the potentially hard-of-hearing children, and the final statistics collated on the study group.

SIGNATURE OF PRINCIPAL INVESTIGATOR S J Crowe

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

The Johns Hopkins School of Medicine and School of Hygiene and Public Health

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
B-19	7/48 - 10/49	$35,019	B-19 C3	11/51 - 10/52	$17,772
19 C1	11/49 - 10/50	20,433	19 C4	11/52 - 14/54	20,433
19 C2	11/50 - 10/51	17,772			

Support from this source terminated 4/54

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
B-19 (C3)
P.H.(5)

CONTRACTING AGENCY: FEDERAL SECURITY AGENCY, PUBLIC HEALTH SERVICE

TITLE OF PROJECT:

The efficiency of nasopharyngeal irradiation in the prevention of deafness in children

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Samuel James Crowe, M.D., Adjunct Professor of Laryngology and Otology

John Earle Bordley, M.D., Associate Professor of Laryngology and Otology

William G. Hardy, Ph.D., Associate Professor of Laryngology and Otology

NAME AND ADDRESS OF INSTITUTION:

School of Hygiene and Public Health, The Johns Hopkins University, 615 N. Wolfe Street, Baltimore 5, Maryland

APPLICANT — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. App.	Grant No.	Period of Operation	Amt. App.
B-19	7/1/48 - 10/31/49	$35,019	B 19 C3	11/1/51 - 10/31/52	$17,772
B-19 C1	11/1/49 - 10/31/50	20,433			
B-19 C2	11/1/50 - 10/31/51	17,772			

A five-year study will undertake to determine the efficacy of nasopharyngeal irradiation at the public health level for the prevention of deafness in school children, and to determine the percapita cost of such treatment. The project is administered with the cooperation of the Baltimore City Departments of Health and Education. It is carried out by field-teams who work in the schools.

Approximately 7,000 children, average age 8, were selected to provide a representative distribution. This group has been screened for hearing impairment and those screened, re-tested and given a full otologic examination, including nasopharyngoscopy. Approximately 10 per cent of these screened are included in the study-group by the selected criteria of hearing loss. Half receives nasopharyngeal irradiation by the method of alternate selection, and composes the experimental group; the other half is treated with blank radium applicator and composes the control group.

After treatment, the study-group is re-examined twice each year. Children whose symptoms warrant will be re-irradiated. In the fifth year the entire group of 7,000 children will be re-examined and the findings matched with those of the initial examination.

It is believed that this study will provide data for definite conclusions as to the preventive efficacy of this treatment and its cost at the public health level.

SIGNATURE OF PRINCIPAL

PHS-166-2 RE REV. 6-49
FORM APPROVED
BUDGET BUREAU NO. 68-R103

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference without consent of the principal investigator.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
A-81(C2)
M. H.(C)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

The Metabolism of Calcium in Human Beings

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Robert S. Harris, Ph.D., Prof. of Biochemistry of Nutrition, Dept. of Food Technology, Massachusetts Institute of Technology, Cambridge
Felix Bronner, Ph.D., Research Assoc. Dept. of Food Technology, Massachusetts Institute of Technology, Cambridge
Clemens E. Benda, M.D., Dir. Research, Walter E. Fernald State School, Dept. Mental Diseases, State of Massachusetts
Joan R. Moor(Tech. Asst.) and Gloria Romano(Tech. Asst.)M.I.T.

NAME AND ADDRESS OF APPLICANT INSTITUTION

Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, Mass.

SUMMARY OF PROPOSED WORK (300 words or less — omit confidential data)

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

In earlier work with children using calcium^{45} it was found that (a) Ca^{45} is rapidly absorbed from the intestine into the blood stream and the peak of absorption is reached in three hours, (b) the urine is the more important route of excretion of endogenous calcium, (c) injected calcium disappears from the blood stream into the tissues very rapidly (80% in 5 minutes), (d) the % absorption of calcium from the intestinal tract decreases with increasing amounts of calcium in the diet, (e) food phytates decrease absorption significantly when the food calcium intake is low, and (f) this effect of food phytates is masked when the food calcium intake is high. In many ways these studies are preliminary and the results are not conclusive. It is not definitely known whether isotope experiments with Ca are affected by the nature of the isotope used, and an experiment has been planned which should answer that question. The data on the effect of food mass (dry weight of food) upon calcium absorption are not at all conclusive. We have observed that food mass does effect iron absorption, but it is important that valid data be obtained with calcium. There is some evidence that the total absorption of calcium increases with increase in intake, but that the percent absorption decreases with increase in calcium ingested. Since this evidence is fragmentary, experiments have been planned which should establish this point. Further studies of the excretion of endogenous excretion of calcium in the feces and urine of human beings have been planned. It is important in nutritional chemistry to know what proportion of fecal calcium is endogenous and what proportion is unabsorbed calcium.

SIGNATURE OF PRINCIPAL INVESTIGATOR Robert S. Harris

Robert S. Harris

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

Massachusetts Institute of Technology, Cambridge 39, Mass.

#	Grant No.	Period of Operation	Amt. App.
	A-81	1/52 - 12/52	$12,900
	81 C1	1/53 - 12/53	12,000
	81 C1S1	7/53 - 12/53	4,628
		LEAVE BLANK	
	81 C2	1/54 - 12/54	16,628
	81 C3	1/55 - 12/55	16,628 *

* Committment

PHS-416-1(RG)

Form Approved

Prepared for the Medical Sciences Information Exchange. Not for publication or publication reference without consent of the principal investigator.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

LEAVE BLANK
A-81 (C)
M&N (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

Study of the Absorption and Metabolism of Radioactive Calcium (Ca^{45}) by Human Subjects

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT

Dr. Robert S. Harris, Prof. of Biochem. of Nutrition, Mass. Institute of Technology

Dr. Clemens E. Benda, Dir. of Research, Walter E. Fernald State School, Dept. of Mental Diseases, Commonwealth of Massachusetts

Dr. Felix Bronner, Research Associate, Mass. Institute of Technology

NAME AND ADDRESS OF APPLICANT INSTITUTION

Massachusetts Institute of Technology, Cambridge 39, Mass.

SUMMARY OF PROPOSED WORK (300 words or less — omit confidential data)

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Calcium^{45} is being administered orally or intravenously, in the presence or absence of food, in a study of the absorption, retention, and excretion of various salts of calcium using adolescent boys as subjects institutionalized for mental disease. Also, a study of calcium (Ca^{45}) metabolism in various types of mental disease (mongolism, gargoylism, cretinism, etc.) is in progress. Recently permission was granted by the Atomic Energy Commission for the use of 5 microcuries of Ca^{45} in our experimental subjects.

SIGNATURE OF PRINCIPAL INVESTIGATOR

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED

Massachusetts Institute of Technology, Cambridge, Mass.

Walter E. Fernald State School, Waverly, Mass.

Grant No.	Period of Operation	Amt. App.
A-81	1/1/52 - 12/31/52	$12,900
81 C1	1/1/53 - 12/31/53	12,900

LEAVE BLANK

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-81(C3)

M & N (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Metabolism of Calcium in Human Subjects

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Robert S. Harris, Dept. Food Tech., M.I.T., Cambridge, Mass.
Robert L. Wanner, Ph.D.
Clemens B. Benda, M.D., W. Fernald State School, Waverley, Mass.
Joan R. Moor, M.S., Dept. Food Tech., M.I.T., Cambridge, Mass.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge 39, Mass.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Different calcium salts are used by the food industry in the enrichment of food products, and by the medical profession to fortify the diets of patients. It is possible that the calcium of different salts is not equally available, yet we know of no report of the successful comparison of the availabilities of several calcium salts in human subjects.

In this investigation, 15 institutionalized boys (mean age 15.2 yrs) have been fed succesively four calcium salts (gluconate, lactate, citrate and carbonate) and milk at 5 week intervals. Each feeding contained 250 mg. calcium and 1 μc radio-calcium^{45}. Serum samples were obtained approximately 3 hrs following ingestion of the test material; urine and feces were collected for a period of 5 days.

Analysis of samples is in progress.

Submitted for period beginning-January 1955

SIGNATURE OF PRINCIPAL INVESTIGATOR: Robert S. Harris

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-81	1/52 - 12/52	$12,900
81 C1	1/53 - 12/53	12,000
81 C1S1	1/53 - 12/53	4,628
81 C2	1/54 - 12/54	16,628
81 C3	1/55 - ~~12/55~~ 8/56	16,628

PHS-166
REV. 10-52

Form Approved
Budget Bureau No. 92-R001.2

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-C1 (C4)
N & N (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Metabolism of Calcium in Human Subjects. Effect of Food Mass and Calcium Mass on Calcium^{45} Absorption

GIVE NAMES, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Robert S. Harris, Ph.D., Dept. Food Tech., MIT, Cambridge, Mass.
Robert L. Wanner, Ph.D. Dept. Food Tech., Research Associate, MIT
Clemens E. Benda, M.D., (State)
Joan R. Moor, M.S., Dept. Food Tech., MIT, Cambridge, Mass.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, Mass.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

It is proposed to determine the effect of food mass and calcium mass in a meal upon calcium (Ca^{45}) absorption. Adolescent boys, institutionalized for mental inadequacy, will be fed cooked farina containing measured amounts of total calcium and calcium^{45}. Atomic Energy Commission permission to use Ca^{45} in these subjects has been granted.

Each subject will be used in four experiments. Food mass and calcium mass in seven combinations will be evaluated. The calcium levels used will represent 0, 1/3, 1/6 the N.R.C. recommended daily allowance for adolescent boys. The calcium will be in the form of a nutritionally available salt.

Total calcium and calcium^{45} analytical values will be obtained from samples of blood, urine and feces taken during the first 305 days. These data should indicate how the quantity of food and/or of calcium affect the uptake of calcium from the intestinal tracts of children

SIGNATURE OF PRINCIPAL INVESTIGATOR Robert S. Harris

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Mass. Institute of Technology

INVESTIGATOR — DO NOT USE THIS SPACE

PHS-166
REV. 8-54

Form Approved
Budget Bureau No. 92-R001.2

A-836(R)

Not for publication or publication reference.

NOTICE OF RESEARCH PROJECT

Physio (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT: **A Study of Digestion and Absorption From the Gastro-intestinal Tract in Health and Disease Using Radioactive Material**

PRELIMINARY

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. Julian M. Ruffin, Professor of Medicine
Dr. George Baylin, Professor of Radiology

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Duke University, Durham, North Carolina

SUMMARY OR PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

A study of gastro-intestinal function utilizing I-131 labeled protein and fat has been initiated. Test meals containing the labeled materials were administered to animals and humans and studies done on the blood, urine, and feces. In normal subjects, the isotope recovery in the blood was such that characteristic reproducible curves of isotope levels were obtained. The recovery of the isotope in the feces of the controls was consistently between 0-2%. Isotope levels in the urine following the test meals were not of a consistent pattern.

The tests have been applied to patients with sprue, Whipple's disease, enteritis, and other diseases, and results indicate they may prove valuable clinically. Patients with pancreatic diseases show consistent deviations from the normal.

Further studies must be done on animals and patients to evaluate gastro-intestinal function more fully. We plan to do segmental intestinal studies to elucidate more fully the function of various sections of the small intestines. The techniques will be applied to patients in different decades of life in order to evaluate intestinal function. Postoperative patients will be studied in order to determine the effects of various operative procedures on intestinal function.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Medical

INVESTIGATOR — DO NOT WRITE IN THIS SPACE

PRELIMINARY

PHS-166

Form Approved
Budget Bureau No. 72-R001.2

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
B-188(C)
S. D. (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT: The Application of Radioactive Isotopes to Pathological Conditions of the Eye.
a. Uptake of radioactive material to ocular tumors. (Beta
b. Effect of radioactive isotopes upon corneal cascularization (radiation.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Charles I Thomas, M.D., Assistant Clinical Professor of Ophthalmology, Department of Surgery, Western Reserve University.
H. L. Friedell, M.D., Professor of Radiology, Western Reserve University.
L. V. Johnson, M.D., Clinical Professor of Ophthalmology, Department of Surgery, Western Reserve University.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Western Reserve University
Cleveland, Ohio

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

To study the application of radioactive isotopes to pathological conditions of the eye. This is to be divided into two parts:

a. The study of the uptake of radioactive material by ocular tumors.

b. Continue investigation on a scintillation counter for use in this problem.

c. The study of the effect of radioactive isotopes upon pathological vascularization such as the cornea.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Charles I Thomas

Identify the professional School (medical, dental, public health, nursing, or other) with which the project should be identified:

SCHOOL Western Reserve University Medical School

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
B-188	9/53 - 8/54	$11,987
188 C1	9/54 - 8/55	12,000
188 C2	9/55 - 8/56	12,000 *
188 C3	9/56 - 8/57	12,000 *

PHS 188 REV. 10-52

* Commitment

Form Approved
Budget Bureau No. 82-R081.2

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
AH-1137

M & M (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

PRELIMINARY

A New Method for In Vivo Study of Fat Metabolism and Deposition in Man

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

David Alan Turner, Director, Surgical Research Metabolic Lab and Assistant Professor of Biochemistry.

Benedict J. Duffy, Jr., M.D., Director, Isotope Laboratory

NAME AND ADDRESS OF APPLICANT INSTITUTION:

**Georgetown University School of Medicine
Washington 7, D.C.**

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

1) A comparison of the absorption and metabolism of carbon 14 and iodine 131 labelled fats in animals, with emphasis on tissue deposition.

2) The determination of the applicability of the labelled fat techniques employed to studies of normal and abnormal fat metabolism resulting from pathological, congenital or surgical alterations or normal function both in man and animals.

3) The accumulation of data pertinent to the subjects mentioned above and with particular emphasis on three phases, blood lipids and atherogenesis, tissue deposition of lipids and the digestion and absorption of lipids.

4) Oral and intravenous I-131 and C-14 labelled triolein and oleic acid, determined by the methods of Turner.

5) The xylose tolerance test for the evaluation of over-all intestinal absorptive function as described by Turner et al.

6) Chemical analyses of serum and fecal lipids by conventional methods.
Cholesterol by the method of Schoenheimer and Sperry.
Total lipid by the method of Folch as modified by Sperry.
Phospholipid by the method of Fiske and Subbarow.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified

SCHOOL

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

A-610

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference without consent of the principal investigator.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
~~B-3108(cs)~~ (PRELIM)
[redacted] (3)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

"Ethionine as a Metabolic Antagonist of Methionine. The Relationship of Disturbances in Protein Metabolism to Pancreatic Necrosis and Atrophy, Testicular Degeneration and Fatty Liver in Ethionine Treated Rats."

GIVE NAMES, DEPARTMENTS, AND SPECIFIC TITLES OF [redacted] AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Associate in
Emmanuel Farber, M.D., Ph.D., Asst. Prof. of Pathology - Biochemistry
Principal Investigator

NAME AND ADDRESS OF APPLICANT INSTITUTION

Tulane University of Louisiana, School of Medicine
1430 Tulane Avenue, New Orleans, Louisiana

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

It is proposed to study the effect of parenterally administered ethionine on the in vivo incorporation of radioactive methionine into the proteins of liver, pancreas and testis of rats and to correlate the results with the histological appearances. At certain time intervals after the administration of both ethionine and radioactive methionine, methionine and cystine will be separated from hydrolysates of the total proteins of the above organs by paper chromatography. The specific activities of these amino acids will be determined. Methionine, cystine, sulfate, etc. will be separated from the soluble tissue fluids by precipitation and by paper chromatography and their activities and/or specific activities will be measured. These studies on methionine metabolism will be performed on animals treated with ethionine under conditions known to produce fatty liver and on other animals protected against the change. Respiration of tissue slices, P32 incorporation into nucleic acid and glycogen synthesis (liver) will be studied under these same conditions at time intervals at which there is already evidence of interference with protein metabolism, in order to obtain a time sequence of changes, if any.

SIGNATURE OF PRINCIPAL INVESTIGATOR Emmanuel Farber

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

School of Medicine

(PRELIMINARY)

LEAVE BLANK

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
A-629
Endo. (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

COPY

Metabolic Studies with 17-Hydroxycorticosterone-4-C^{14}.

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Robert H. Williams, M. D., Professor & Exec. Officer, Dept. of Medicine, University of Washington School of Medicine.
Paul Hyde, Ph.D., Research Associate, Dept. of Medicine, University of Washington School of Medicine.

NAME AND ADDRESS OF APPLICANT INSTITUTION

University of Washington School of Medicine, Seattle 5, Washington.

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Many of the sites of utilization or transport of 17-hydroxy-corticosterone or its metabolites in the rat have not been delineated. In order to study this problem, blood levels of 17-hydroxycorticosterone-4-C^{14} or its radiometabolites, high enough for accurate measurement of radioactivity and within the physiological range, must be produced. These data could be obtained better after a study of the rates of elimination of C^{14} in the bile, urine, feces, and expired air (if any) following the administration of the isotopic hormone by various routes. When adequate blood levels of radioactivity were present, studies would be made on the concentration of C^{14} by the tissues under relatively physiological conditions. Also an investigation will be carried out on the nature of the transport of the radiocarbon in blood, lymph, and bile.

SIGNATURE OF PRINCIPAL INVESTIGATOR Robert H. Williams
Robert H. Williams, M.D.

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

University of Washington School of Medicine.

Grant No.	Period of Operation	Amt. App.
A-629	4/54 - 3/55	$9,828
629 C1	4/55 - 3/56	9,000 *

LEAVE BLANK

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-629(C)
Endo (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Metabolic Studies with Hydrocortisone-4-C^{14}

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Robert H. Williams, M.D., Professor & Executive Officer, Department of Medicine.

Paul Hyde, Ph.D., Research Associate, Department of Medicine.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Washington School of Medicine, Seattle 5, Washington

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Following the administration of relatively physiological quantities of hydrocortisone-4-C^{14} to normal rats, the radiocarbon has been found to be excreted in bile, urine, and feces at a rate dependent upon the route of administration. These studies will be extended to include these excretory pathways in adrenalectomized animals and others given small amounts of insulin, thyroxine, and ACTH. Chemical and enzymatic experiments will be performed in an effort to determine the nature of the transport of hydrocortisone-4-C^{14} or its radiometabolites in bile and urine under these conditions. Subcellular fractionation of the liver will also be carried out concurrently.

Approved [illegible] Medicine
Original Signed By
12-29-54 by George [illegible], M.D.
Date Dean

SIGNATURE OF PRINCIPAL INVESTIGATOR R H Williams

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL School of Medicine, U. of Washington

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-629	4/54 - 3/55	$9,828
629 C1	4/55 - 3/56	8,997

PHS-166
REV. 10-52

Form Approved
Budget Bureau No. 92-R001.2

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-629(C2)
Endo (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Metabolic Studies with Hydrocortisone-4-C^{14}

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Robert H. Williams, M.D. Professor of Medicine

Paul M. Hyde, Ph.D. Research Associate , Department of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Washington School of Medicine, Seattle, Washington

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

1) A comparison of the role of the liver in the metabolism of hydrocortisone-4-C^{14} in adrenalectomized and normal rats will be made.

2) Studies in the excretion of radiocarbon and the subcellular concentrations of radioactivity in the liver after the administration of physiological quantities of isotopic compound F may show whether any aberration in the hepatic metabolism of this hormone exists in adrenalectomized animals.

3) In addition, the nature of the transport form of the C^{14} in plasma after giving this radiosteroid will be investigated using zone electrophoresis on starch.

Submitted for period
beginning - April 1956

SIGNATURE OF PRINCIPAL INVESTIGATOR R H Williams

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amount Approved
A 629	4/54 - 3/55	$9,828
629 C1	4/55 - 3/56	8,997
629 C2	4/56 - 3/57	9,947
629 C3	4/57 - 3/58	9,000 *

* Commitment

PHS-166
REV. 6-54

Form Approved
Budget Bureau No. 92-R001.2

Prepared by
Office of Exchange of Information, PHS
Not for Publication

NOTICE OF RESEARCH PROJECT

Contracting Agency: Public Health Service

Proposal Number: _____ Date Received: 2/19/48

Project Number: ~~RG 1389~~ 1-8 Date Approved: _____

Descriptive Title of Project: "Clinical uses of radioactive iodine in normal and disordered thyroid function"

Principal Investigator: Dr. Sidney C. Werner, Associate in Medicine

Name of Institution: College of Physicians & Surgeons, Columbia University

Grant No.	Period of Operation	Amt. App.
A-8 ~~RG 1389~~	1/1/49 - 12/31/49	$4,968

Abstract by Principal Investigator when contract has been approved.

This information will be supplied to Federal Agencies to avoid unknowing duplication of this work.

Prepared by Office of Exchange Information, PUBLIC HEALTH SERVICE. Not for publication or publication reference without consent of the principal investigator(s).

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space) A-8 (C2)

N & B

CONTRACTING AGENCY: FEDERAL SECURITY AGENCY, PUBLIC HEALTH SERVICE

TITLE OF PROJECT:

Effect of ACTH and TSH (thyrotrophin) on normal and disordered thyroid states in man.

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. Sidney C. Werner, Asst. Prof. Clin. Med., College of Physicians and Surgeons Columbia University - responsible investigator.

Dr. Edith H. Quimby, Assoc. Prof. Radiology, College of Physicians and Surgeons.

Dr. Howard Hamilton, Fellow, Department Medicine, College of Physicians and Surgeons.

NAME AND ADDRESS OF INSTITUTION:

College of Physicians and Surgeons, Columbia University, 630 West 168th Street, New York, N.Y.

APPLICANT — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. App.
A-8	1/1/49 - 12/31/49	$4,968
8 C1	1/1/50 - 12/31/50	7,506
8 C2	1/1/51 - 12/31/51	7,506

SUMMARY OF PROPOSED WORK — *(200 words or less — Omit Confidential data)*

In the Program of Exchange of Information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

This project is intended to investigate the mechanism responsible for the rise in basal metabolic rate produced by ACTH in hyperthyroid and hypothyroid individuals, apparently not associated with change in thyroid function; the effect of ACTH in chronic thyroiditis; the use of TSH (thyrotrophin) as a diagnostic tool in states of hypofunction of the thyroid; the question of abnormal versus excessive secretion by the thyroid in toxic goiter; and the possibility of sharply reducing the tracer dosage of I-131, now used in clinical diagnostic assay of thyroid activity.

SIGNATURE OF PRINCIPAL INVESTIGATOR _____

REMOVE SMUDGE SHEET BEFORE TYPING

PHS-166-1 RG; REV. 6-49
FORM APPROVED
BUDGET BUREAU NO. 68-R403

#

Prepared by Office of Exchange Information, PUBLIC HEALTH SERVICE. Not for publication or publication reference without consent of the principal investigator(s).

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-1(03)
[illegible] (2)

CONTRACTING AGENCY: FEDERAL SECURITY AGENCY, PUBLIC HEALTH SERVICE

TITLE OF PROJECT:

The Study of Normal and Disordered Thyroid States in Man.

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Sidney C. Werner, M.D., Assistant Professor of Clinical Medicine,
Columbia University College of Physicians and Surgeons

NAME AND ADDRESS OF INSTITUTION:
Columbia University College of Physicians and Surgeons
630 West 168th Street, New York 32, N.Y.

SUMMARY OF PROPOSED WORK (200 words or less — Omit confidential data)

In the Program of Exchange of Information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The project continues work in progress for the past five years. Current interest is essentially in the establishment of the role of the anterior pituitary in Graves' disease, in the pursuit of methods differentiating "thyrotoxic" from "malignant" exophthalmos and quantitating thyroid activity, in investigating the mechanism of effect of Compound F on thyroid function, in studying the use of thyrotropin intravenously, and in establishing a clinical tracer method for blood, urine and gland uptake using only 1 to 3 uc. of I131.

PHS-166-B (RG) REV. 6-49
FORM APPROVED
BUDGET BUREAU NO. 68-R403

SIGNATURE OF PRINCIPAL INVESTIGATOR _____

REMOVE SMUDGE SHEET BEFORE TYPING
Replace smudge sheet when finished and return all copies to PHS.

APPLICANT — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. App.
A-3	1/1/[illegible] - 12/31/[illegible]	[illegible],958
[illegible] 31	1/1/50 - 12/31/50	7,506
[illegible] 32	1/1/51 - 12/31/51	7,506
A-3 C3	1/1/52 - 12/31/52	37,506

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FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
A-8(C4)

Endo. (5)

SUBMITTED: Public Health Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

The Study of Normal and Disordered Thyroid States in Man

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT

Sidney C. Werner (principal investigator) Asst. Prof. Clin. Med., Columbia University, College of Physicians & Surgeons
Howard Hamilton Research Assistant, Columbia University, College of P & S
Edith H. Quimby Associate Professor of Radiology, Columbia University, College of Physicians and Surgeons

NAME AND ADDRESS OF APPLICANT INSTITUTION

Columbia University, College of Physicians and Surgeons,
630 West 168th Street, New York 32, N.Y.

SUMMARY OF PROPOSED WORK (300 words or less - unclassified)

In the exchange of information summaries of research programs are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The current project is a continuation of the first year of project A-8 (C3). Methods for more accurate appraisal of thyroid function and to distinguish "malignant" from "thyrotoxic" exophthalmos are under investigation as well as other studies.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Sidney C Werner

Col. Un...

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

Grant No.	Period of Operation	Amt. App.
[illegible]	[illegible]	[illegible]
A 8 C1	1/1/50 - 12/31/50	[illegible]
A 8 C2	1/1/51 - 12/31/51	7,506

Grant No.	Period of Operation	Amt. App.
A 8 C3	1/1/52 - 12/31/52	$7,506
8 C4	1/1/53 - 12/31/53	7,506

[illegible] BLANK

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FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
A-8 (C5)
Endo (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

THE STUDY OF NORMAL AND DISORDERED THYROID STATES IN MAN

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Principal Investigator: Sidney C. Werner, M.D., Assistant Professor of Clinical Medicine, Columbia University College of Physicians and Surgeons, New York

Research Assistant: Maryloo Spooner, M.D., Ph.D.

NAME AND ADDRESS OF APPLICANT INSTITUTION

Columbia University, College of Physicians and Surgeons
630 West 168th Street, New York 32, N.Y.

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The evidence that hyperthyroidism is probably not mediated through the anterior pituitary is being extended. Studies have been initiated to gain more reliable and quantitative data concerning iodine turnover in the body. The physiological effects of triiodothyronine and of l-sodium thyroxin are to be further investigated.

SIGNATURE OF PRINCIPAL INVESTIGATOR

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

SCHOOL Columbia University

Grant No.	Period of Operation	Amt. Appr.
A-8	1/49 - 12/49	$4,968
8 C1	1/50 - 12/50	7,506
8 C2	1/51 - 12/51	7,506
8 C3	1/52 - 12/52	7,506
A-8 C4	1/53 - 12/53	$7,506
8 C5	1/54 - 12/54	14,982
8 C6	1/55 - 12/55	19,194
8 C7	1/56 - 12/56	19,194 *

* Commitment

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

DEPARTMENT OF
HEALTH EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO (Do not use this space)
A-8(C7)
Endo (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

THE STUDY OF NORMAL AND DISORDERED THYROID STATES IN MAN

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Sidney C. Werner, M.D., Associate Professor of Clinical Medicine
Columbia University

NAME AND ADDRESS OF APPLICANT INSTITUTION:

College of Physicians and Surgeons, Columbia University
630 West 168th Street, New York 32, New York

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The earlier studies in this laboratory of a "multiple pulse" method of I^{131} administration made in healthy subjects, of body iodine distribution and turnover are being extended to patients with thyroid disease.

A ten-year summary of the results in this laboratory with I^{131} treatment of hyperthyroidism is under way.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Submitted for period beginning-January 1956

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL College of Physicians and Surgeons, Columbia University

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-8	1/49 - 12/49	$4,968
8 C1	1/50 - 12/50	7,506
8 C2	1/51 - 12/52	7,506
8 C3	1/52 - 12/52	7,506
A-8 C4	1/53 - 12/53	$ 7,506
8 C5	1/54 - 12/54	14,982
8 C6	1/55 - 12/55	19,194
8 C7	1/56 - 12/56	20,038

PHS-166
REV. 5-54

Form Approved
Budget Bureau No. 92-R001.2

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-8 (C8)
Endo. (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md. PRELIMINARY

TITLE OF PROJECT:

STUDY OF NORMAL AND DISORDERED THYROID STATES IN MAN

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Responsible Investigator: Dr. Sidney C. Werner, Associate Professor of Clinical Medicine, Columbia University College of Physicians & Surgeons

Dr. Richard J. Block, Biochemist, Boyce Thompson Institute for Plant Research.

Professor Howard Levene, Associate Professor of Mathematical Statistics, Columbia University

NAME AND ADDRESS OF APPLICANT INSTITUTION:

College of Physicians & Surgeons, Columbia University, 630 W. 168th St., NY 32, NY

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

This application is designed to continue work in progress on

1) **the pathogenesis of Graves' disease;**
2) **the distribution and turnover of iodine in the body, studied with daily doses of I^{131};**
3) **the behavior of chick thyroid explants in an effort to devise a better assay for thyrotropin;**
4) **the physiological effects of trios and tetros**

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL **Columbia University, College of Physicians and Surgeons**

INVESTIGATOR — DO NOT USE THIS SPACE

PENDING - NOVEMBER 1956 COUNCIL

PHS-166
REV. 5-56

Form Approved
Budget Bureau No. 92-R301.2

Submitted for the Bio Sciences Information Exchange.
Not for publication or publication reference.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-29(C5)
Endo (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

A Study of the Effect of Normal and Diseased Tissues on the Production and Fate of Adrenocortical Hormones.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. Leo T. Samuels, Chairman and Head, Department of Biochemistry
Dr. Kristen Eik-Nes, Research Instructor, Department of Biochemistry

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Utah College of Medicine
Salt Lake City 12, Utah

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The effect of high circulating levels of cortisol on the metabolism of cortisol-4-C^{14} will be the major topic for investigation in the year to come. High levels of 17-hydroxycorticosteroids will be induced by the standard ACTH test and the metabolic behavior of cortisol-4-C^{14} will be studied. We shall also endeavor to determine the metabolic rate and distribution volume for 17-hydroxycorticosteroids following the intravenous administration of 3-5 mg. cortisol per kg. body weight.

From the logarithmic curve obtained in the standard cortisol removal test a rate of removal of cortisol per unit volume of plasma can be calculated for any circulating level of the steroid. On the basis of the apparent distribution volume obtained by extrapolation of the curve to zero time, the total production per unit time required to maintain a given level of cortisol in any subject can be estimated. Experiments are now planned to test this hypothesis. The amount of cortisol calculated to be required for a given plasma level will be added to the blood stream per unit time over a period of 4-6 hours, and the levels of 17-hydroxycorticosteroids will be determined at intervals to see if the calculated plateau level is obtained. If not, attempts will be made to assess the reasons for the lack of correspondence. This technique is planned for use in our investigation of diurnal variation of 17-hydroxycorticosteroids in man.

Submitted for period beginning April 1956

SIGNATURE OF PRINCIPAL INVESTIGATOR: Leo T. Samuels

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL: medical

INVESTIGATOR — DO NOT USE THIS SPACE.

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
A-29	4/50 - 3/51	$16,696	A-29 C3	4/54 - 3/55	$11,607
29 C1G1	4/51 - 3/52	9,450	29 C4	4/55 - 3/56	12,034
29 C1G2	4/52 - 3/53	9,450	29 C5	4/56 - 3/57	12,814
29 C2	4/53 - 3/54	10,552	29 C6	4/57 - 3/58	12,814 *

* Commitment

PHS-166

Form Approved
Budget Bureau No. 92-R001.2

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Prepared for the Bio Science

PROJECT NO. (Do not use this space)

[redacted]

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-122 (C3)
Surg (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT: PRELIMINARY

To study the effect of various serum bilirubin levels on the quantitative excretion of gallbladder contrast media

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Spalding Schroder, M. D., Assistant Professor of Medicine, Department of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:
Emory University
Emory University, Georgia

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The data that have been obtained from these studies thus far demonstrate that hyperbilirubinemia alone, in the absence of parenchymal liver disease or extrahepatic obstruction, interferes with the excretion of Priodax. It was also observed that when Priodax and Bromsulfalein were injected simultaneously, a delay in reaching a peak excretion of Priodax occurred, and the peak level was less than when Priodax was injected alone. This finding requires further evaluation since BSP injections were made simultaneously with Priodax injections in many of the control studies prior to bilirubin and Priodax injection. The results thus far have been obtained on dogs that have been cannulated. The inability to maintain consistently normal nutrition and liver function in such external bile-fistula dogs has proven to be the greatest hindrance in the progress of this study, and only a small proportion of the dogs survived the entire proposed procedure. It is to be hoped that this difficulty will be overcome in future experiments through the use of the Thomas fistula.

Further studies are planned in regard to the metabolic fate of various cholecystographic media now available. A new contrast medium Cholegraphin (20% colorless aqueous solution of the Disodium salt of N, N1 adipyl - bis-(3 - amino - 2,4,6 - triodo) - benzoic acid) is currently under investigation in the departments of Radiology, Surgery and Medicine of Emory University and Grady Memorial Hospital. This contrast medium is excreted in high concentration by the liver rendering the biliary duct system radiopaque. Under normal conditions approximately 90% of the intravenously injected contrast media is excreted by the liver and approximately 10% by the kidneys. It has been claimed that there is no significant reabsorption from the GI tract.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

PHS 156

Form Approved

PROJECT NO. (Do not use this space)
A-169

M&E (1)

AGENCY: Public Health Service

Effect of thyroid extract and TSH administration on pituitary-thyroid function in patients with nephrosis, cirrhosis, and diseases associated with hypothyroidism, hyperthyroidism or other metabolic abnormalities.

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

MARTIN PERLMUTTER, M.D., Clinical Instructor of Medicine, State University Medical Center at N.Y.; Research Associate and Chief of Endocrine Research Laboratory and Clinic, Maimonides Hospital.

MARTIN G. GOLDNER, M.D., Clinical Prof. of Medicine, State Univ. Medical Center at N.Y.; Chief, Medical Service, Veterans Administration Hospital, Brooklyn 9, N.Y.

NAME AND ADDRESS OF INSTITUTION:

State University Medical Center at New York and its affiliated institutions; Dept. of Medicine of the Maimonides Hosp. of Bklyn. and the V.A. Hospital, Brooklyn 9, N.Y.

APPLICANT — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. App.
A-169	1/1/52 - 12/31/52	$ 12,096

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential)

In the Program of Exchange of Information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

We have demonstrated that the ingestion of thyroid extract is followed by the inhibition of thyroid gland activity. This inhibition is overcome by the injection of small doses of TSH. (Manuscript enclosed).

In the nephrotic state of chr. glomerulonephritis, the BMR and serum PBI are below normal while the uptake of I^{131} by the thyroid is normal or high. In one such patient, the uptake of I^{131} by the thyroid gland fell from high normal to very low levels when thyroid was ingested. This was not associated with any change in the subnormally low levels of serum PBI (Preliminary investigation in our laboratory).

The purpose of this project is to determine if there is adequate loss of PBI in the urine of nephrotic patients to account for the low serum PBI which is associated with a normal uptake of I^{131}. After this control period the effect of the ingestion of thyroid extract on BMR, serum cholesterol, serum PBI, uptake of I^{131} by the thyroid, serum level of TSH (D'Angelo method) and urinary PBI will be studied. The comparative effect of TSH injection will be studied in both the control period and also while the thyroid gland is inhibited by thyroid extract ingestion. Thus we hope to gather data concerning the reason for the low serum PBI in nephrosis, and the mechanism whereby thyroid extract ingestion inhibits thyroid gland activity without elevating the low serum PBI.

Similar studies will be undertaken to determine the cause of the low serum PBI in cirrhosis. In addition the effect of thyroid extract and TSH administration will be studied in various other conditions causing abnormal thyroid function such as hypothyroidism, hyperthyroidism, hypopituitarism, acromegaly, Cushing's syndrome, and other endocrimopathies.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Martin Perlmutter

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NOTICE OF RESEARCH PROJECT
Medical Sciences Information Exchange
Not for Publication

Project No. A-169 C1
Endo. (5)

Supporting Agency: Public Health Service

Title of Project: "Effect of Thyroid Extract and TSH Administration on Pituitary Thyroid Function in Patients with Nephrosis, Cirrhosis, and Diseases Associated with Hypothyroidism, Hyperthyroidism or other Metabolic Abnormalities"

Principal Investigator: Martin Perlmutter, M.D.-Dept. of Med., Asst. Clin. Prof.
Martin G. Goldner, M.D.-Dept. of Med., Clinical Professor
Stanley Slater, M.D. -Dept. of Med., Clinical Instructor

Name of Institution: The Research Foundation of State University of New York, Albany, New York

Summary of proposed work:

We are interested in determining the factors controlling thyroid function in nephrosis as well as in some endocrinophthies. We are studying the effect of the ingestion of thyroid extract upon serum and urinary PBI in normals and patients with nephrosis. In addition we are studying the up-take of radioactive iodine and the BMR's. We are thus attempting to see whether the loss of PBI in the urine in nephrosis can explain the low serum PBI found in this condition. We are also studying the effect of increasing conditions of ingested thyroid extraction the thyroid function of normal individuals and in patient who are spontaneously myxedematous or who have had myxedema induced by radioactive iodine therapy. And finally we are studying the mechanisms of the thyroid inhibition which occurs after the administration of ACTH or Cortisone.

Grant No.	Period of Operation	Amt. App.
A-169	1/1/52 - 12/31/52	$12,096
169 C1	1/1/53 - 12/31/53	10,368

NOTICE OF RESEARCH PROJECT
Bio-Sciences Information Exchange
Not for Publication

SUPPORT FROM THIS SOURCE TERMINATED 9/55

Project No. A-169 C2
Endo. (2)

Supporting Agency: Public Health Service

Title of Project: "Factors Controlling Thyroid Function in Nephrosis and Hypoalbuminemic States. Use of Inhibition of Thyroid Function by Ingestion of Thyroid as Diagnostic Aid in Borderline Hyperthyroidism. Differentiation between Benign and Malignant Thyroid Nodules."

Professional Personnel: Martin Perlmutter, M.D., Principal Investigator, Assistant Clinical Professor
Martin G. Goldner, M.D., Associate Investigator, Associate Clinical Professor

Name of Institution: The Research Foundation of State University of New York, Albany, New York

Summary of proposed work:

1. a. Continue to collect data of thyroid function in cirrhotics and nephrotics to see if low serum protein can be definitely ruled out as the cause of the low serum PBI in nephrosis--as our preliminary data indicates.

b. Observe the change in serum and urinary PBI in a group of nephrotics before and during a brief period of ingestion of large doses of thyroid extract-in order to determine if elevated serum PBI is associated with increase in urinary PBI--our preliminary data is equivoval.

c. Compare the response of the thyroid gland of nephrotics and cirrhotics to TSH injections with that of normal subjects. Urinary PBI loss will be determined before and during the response to TSH to see if there is a relation between serum and urinary PBI.

d. The effect of thiouracil drugs in nephrotics will be compared to its effects in normal and hyperthyroid subjects by observing the rate of decline of serum PBI in these conditions. Urinary PBI loss will be studied as serum PBI falls.

2. There are a large group of suspected cases of hyperthyroidism, in which the uptake of I_{131}, is borderline high. These cases will be studied by means of I_{131}, BMR and response to therapy. Then in addition, these patients will be fed approximately 4 grains of thyroid extract per day for 2 weeks, to determine whether the ingestion of thyroid extract inhibits the I_{131} uptake. The final diagnosis of euthyroidism or hyperthyroidism will be correlated with the inhibitory response to the ingested thyroid extract--to determine if the latter can be of diagnostic value.

3. The uptake of I_{131} by the total thyroid gland and the comparative uptake of a single nodule when compared to a similar area on the contralateral side of the gland will be determined by directional gamma counters. (see over)

Grant No.	Period of Operation	Amt. App.
A-169	1/52 - 12/52	$12,096
169 C1	1/53 - 12/53	10,368
169 C2	1/54 - ~~12/54~~ 9/55	12,583

SUPPORT FROM THIS SOURCE TERMINATED 9/55

NOTICE OF RESEARCH PROJECT
Bio-Sciences Information Exchange
Not for Publication
C O P Y

Project No. A-173 (C3)
M&N (2)

Supporting Agency: Public Health Service

Title of Project: "The Effect of Liver Injury and Disease Upon Metabolism of Plasma Proteins"

Professional Personnel: Dr. Wade Volwiler, M.D., Assistant Professor of Medicine
Dr. Patrick D. Goldsworthy, Ph.D., Research Associate in Medicine
Dr. Ian R. Mackay, M.D., Research Fellow in Medicine
Miss Marion P. MacMartin, B.S., Laboratory Technician, Department of Medicine
Miss Patricia Ann Wood, B.A., Laboratory Technician, Department of Medicine
Miss Alys Harty, B.S., Laboratory Technician, Department of Medicine

Name of Institution: School of Medicine, University of Washington, Seattle 5, Washington

Summary of proposed work:

Efforts will be made (1) to determine if significant alteration in rate of manufacture or destruction (turn-over) from the normal state exists. If present, determine if rates can be affected by diet, hormones, etc; (2) to explain the abnormal concentration of certain plasma proteins appearing as a result of liver injury (such as hypoalbuminemia and increased gamma globulin concentration in advanced cirrhosis); (3) to examine validity and interpretation of results of various isotope methods for determining turn-over rates of plasma proteins; and (4) to devise methods for obtaining better homogeneity of certain plasma protein fractions from dog and man, using small volume blood samples.

Studies will be conducted both in dogs and in humans. Dogs will be studied serially in the normal state and following the production of liver damage of various types (chemotoxic, circulatory). Normal humans and patients with advanced chronic cirrhosis will be studied. Turn-over rates of plasma protein fractions will be made after isotope labeling of two types: (1) feeding of labeled amino acid, and (2) transfusion of donor-labeled plasma. (AEC permission for both types has been granted for human work employing S-35). Results of two types will be compared. Fractionation of plasma samples will be made so as to study as many different components as possible (albumin, gamma globulin, beta lipoprotein, fibrinogen). Attempts will be made to measure the exchangeable organic sulfur part of the body in order to determine to what degree S-35 isotope labeling methods may be affected by alteration in pool size.

Grant No.	Period of Operation	Amt. App.	Grant No.	Period of Operation	Amt. App.
A-173	9/50 - 8/51	$6,000	A-173 C2S1	12/52 - 8/53	$3,800
173 C1	9/51 - 8/52	6,000	173 C3	9/53 - 8/54	11,400
173 C2	9/52 - 8/53	6,000	173 C4	9/54 - 8/55	11,400 *

* Commitment

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-173(C4)
H-3 H(5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

The Effect of Liver Injury and Disease Upon Metabolism of Plasma Proteins

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. Wade Volwiler, Department of Medicine, Assistant Professor of Medicine
Dr. Patrick D. Goldsworthy, Department of Medicine, Ph.D. Biochemist
Mrs. Dorothy Shook, Department of Medicine, Chemical technician
Miss Marion P. MacMartin, Department of Medicine, Isotope technician
Miss Patricia Ann Wood, Department of Medicine, Chemical technician
Dr. Ian R. Mackay, Department of Medicine, Research Fellow in Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

School of Medicine, University of Washington, Seattle 5, Washington

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Turn-over rates of plasma albumin, β_1 lipoprotein, fibrinogen and gamma globulin will be measured in normal and cirrhotic man employing two methods of biosynthetic labeling: (1) oral administration of S-35 tagged l-cystine with serial measure of rate of loss of isotope from the particular plasma fraction; (2) transfusion into suitable recipients of S-35 normal donor-labeled plasma with serial measure of rate of loss of isotope from plasma proteins of the recipient.

Protein isolation will be accomplished with methods described by Cohn, Gofman, and Surgenor and associates.

SIGNATURE OF PRINCIPAL INVESTIGATOR [signature]

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Medical

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
A-173	9/50 - 8/51	$6,000	A-173 C2S1	12/52 - 8/53	$3,800
173 C1	9/51 - 8/52	6,000	173 C3	9/53 - 8/54	11,400
173 C2	9/52 - 8/53	6,000	173 C4	9/54 - 8/55	11,400

Form Approved
Budget Bureau No. 82-R211.2

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Prepared for the Medical Sciences Information Exchange.
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FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-173(C5)
(2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

The Effect of Liver Injury and Disease Upon Metabolism of Plasma Proteins

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. Wade Volwiler, Associate Professor, Department of Medicine
Dr. Patrick D. Goldsworthy, Research Associate, Department of Medicine
Dr. Beach Barrett, Research Fellow in Medicine, Department of Medicine
Marion P. MacMartin, Isotope Technician, Department of Medicine
Patricia Ann Wood, Chemical Technician, Department of Medicine
Dorothy F. Shook, Chemical Technician, Department of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Washington, Seattle 5, Washington

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Using biosynthetic introduction of S^{35} as plasma protein label, turn-over times of normal and abnormal human gamma globulin and mercaptalbumin will be determined.

In dogs, comparative turn-over rates of various plasma proteins with S^{35} l-cystine and C^{14}-dl-lysine will be attempted, using starch Zone electrophoresis for separation of plasma protein components.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified: SCHOOL School of Medicine, University of Washington

Submitted for period beginning-September 1955

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
A-173	9/50 - 8/51	$6,000	A-173 C2S1	12/52 - 8/53	$ 3,800
173 C1	9/51 - 8/52	6,000	173 C3	9/53 - 8/54	11,400
173 C2	9/52 - 8/53	6,000	173 C4	9/54 - 8/55	11,400
			173 C5	9/55 - 8/56	12,138
			173 C5S	3/56 - 8/56	~~12,138~~ 1,936

~~* Commitment~~

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Not for publication or publication reference

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-173(C6)
M & M (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

PRELIMINARY

TITLE OF PROJECT

Studies of the Metabolism of Normal and Abnormal Plasma Proteins

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Wade Volwiler, M.D., Department of Medicine, Associate Professor of Medicine
Patrick D. Goldsworthy, Ph.D., Department of Medicine, Research Instructor
Enoch Parrett, M.D., Department of Medicine, Research Fellow
Marion P. MacMartin, Department of Medicine, Isotope technician
Patricia Ann Wood, Department of Medicine, Chemical technician
Dorothy F. Shook, Department of Medicine, Chemical technician

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Washington, School of Medicine, Seattle 5, Washington

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Turn over rates of mercaptalbumin in normal human subjects will be studied following infusion of S^{35} l-cystine donor-labeled plasma.

Serial immunoquantitative studies of human hypogammaglobulinemic sera will be made in all available such patients. Comparisons will be made with specific antibody production following antigen challenge and susceptibility to infection.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Wade Volwiler

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified.

SCHOOL: School of Medicine, University of Washington

INVESTIGATOR — DO NOT USE THIS SPACE

PENDING - JUNE 1956 COUNCIL

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REV. 1956

Form Approved
Budget Bureau No. 92-R0012

NOTICE OF RESEARCH PROJECT
Medical Sciences Information Exchange
Not for Publication
COPY

Project No. A-180 (C2)
Endo. (5)

Supporting Agency: Public Health Service

Title of Project: Relation of Endocrine Glands to Growth and Development.

Professional Personnel: Lawson Wilkins, M.D., Associate Professor of Pediatrics.
Alfred M. Bongiovanni, M.D., Assistant Professor of Pediatrics.
George W. Clayton, M.D., Research Fellow in Pediatrics.

Name of Institution: Johns Hopkins University, School of Medicine, Department of Pediatrics, Baltimore 5, Maryland.

Summary of proposed work:

Our major project at present is the investigation of adrenal hyperplasia of the "adrenogenital type" and the action of cortisone in controlling it. The striking therapeutic effects of cortisone in supressing virilization and permitting normal growth and development have been demonstrated. The long term study of the effects of continuous treatment with cortisone will be continued. The pattern of somatic and sexual development of the treated patients will be followed. From time to time in certain patients who have been treated for long periods cortisone will be omitted to determine whether there is a relapse or whether there may be a permanent alteration of the adrenal disorder. The effects of other steroids such as Compounds B, F, S, and A will be studied. Our laboratory has now set up methods for the study of the patterns of steroids in the urine and blood and we are prepared to apply these to the investigation of the fundamental nature of congenital adrenal hyperplasia. An attempt will be made to determine whether the conversion of precursors into adrenal hormones proceeds along abnormal pathways and whether different steroidal patterns can be correlated with specific symptons such as hypertension, Na loss, hypoglycemic tendency, etc.

In addition to work on the adrenal diseases studies of thyroid disorders using I^{131} tracer techniques will be continued. Certain patients with congenital cretinism show we have found to have thyroid glands of normal size capable of taking up iodine normally will be studied to determine why the gland is unable to synthesize or secrete hormone. We shall continue studying the effects of somatic and sexual development of various hormonal disorders which are encountered in our pediatric endocrine clinic.

Submitted for period

Grant No.	Period of Operation	Amt. Appr.
A-180 G1	7/50 - 6/51	$10,000
180 G2	7/51 - 6/52	10,000
180 C1	7/52 - 6/53	10,261
A-180 C2	7/53 - 6/54	$10,261
180 C3	7/54 - 6/55	13,071 *

* Commitment

Prepared for the Medical Sciences Information Exchange. Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-180(03)

Endo (3)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Relation of Endocrine Glands to Growth and Development

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Lawson Wilkins - Associate Professor of Pediatrics.
Alfred M. Bongiovanni - Assistant Professor of Pediatrics.
George M. Clayton - Research Fellow in Residence, Dept. of Pediatrics.
Judson VanWyk - Research Fellow of National Polio Foundation.
Melvin M. Grumbach - Research Fellow of National Polio Foundation.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Johns Hopkins University, School of Medicine, Baltimore 5, Maryland

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The clinical and therapeutic studies of the effects of cortisone on virilizing adrenal hyperplasia, which were begun in 1950, are to be continued in order to evaluate the long-range patterns of growth and somatic and sexual development. Approximately 40 patients are now under continuous therapy and additional cases are being added constantly. Treatment will be omitted in some of the patients treated longest to determine whether relapses occur.

The nature of the abnormality of the pathways of steroid synthesis in this disorder will be investigated further. Attempts will be made to discover the patterns of steroids secreted in patients with adrenal hyperplasia who show either defective electrolyte regulation or hypertension.

Attempts will be made with I^{131} technics to discover the impairment in the synthesis of thyroid hormone occurring in some cases of familial cretinism in which the thyroid gland is present.

An effort may be made to block or check gonadotropic secretion in cases of "constitutional" sexual precocity.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Lawson Wilkins

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL: Johns Hopkins University, School of

Submitted for period beginning-July 1954

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
A-180 G1	7/50 - 6/51	$10,000	A-180 C4	9/55 - 8/56	$16,356 *
180 G2	7/51 - 6/52	10,000	180 C5	9/56 - 8/57	16,356 *
180 C1	7/52 - 6/53	10,261	180 C6	9/57 - 8/58	16,356 *
180 C2	7/53 - 6/54	10,261	180 C7	9/58 - 8/59	16,356 *
180 C3	7/54 - 8/55	13,071	180 C8	9/59 - 8/60	16,356 *

* Commitment

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-130(C&S)
Endo (3)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Relation of Endocrine Glands to Growth and Development

PRELIMINARY

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Lawson Wilkins, M. D.	Dept. of Pediatrics	Associate Professor of Pediatrics
Claude J. Migeon, M. D.	" " "	Assistant Professor of Pediatrics

NAME AND ADDRESS OF APPLICANT INSTITUTION:
Johns Hopkins University School of Medicine
Johns Hopkins Hospital, Baltimore 5, Maryland

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The long-term continuous treatment of patients with virilizing adrenal hyperplasia with cortisone and similar compounds is being followed into its seventh year. The use of newer steroids, such as the Δ_1 dehydro-derivatives, the 9 α-halogen compounds and "long-acting" esters of cortisone is being studied. Investigations are being pursued concerning the cause of Na-loss and K-retention in some cases of virilizing adrenal hyperplasia. An attempt is being made to determine whether or not the occurrence of sodium loss in a particular case depends upon the ability of the adrenal to compensate for certain steroids causing sodium loss by an increased output of aldosterone.

The relations of the levels of glucocorticoids in maternal and cord plasma at delivery have been studied by Dr. Migeon, and additional studies of placental transmission are being made with the use of C^{14} labelled hydrocortisone & estrogens.

Investigations are planned of possible abnormalities in the synthesis of thyroid hormone both in cases of simple, euthyroid goiter and in "goitrous cretinism" by means of paper chromatographic separation of radioactive iodinated compounds in the plasma. Placental transmission of thyroid hormone is to be studied by administering I^{131} and C^{14} labelled thyroxine to mothers at delivery and determining the levels in maternal and cord blood.

Studies are being made of the sex chromatin patterns in certain males with defective testes.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Lawson Wilkins, M.D.

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

PHS-166
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Form Approved
Budget Bureau No. 82-R001.2

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-181 C2

M&N (2)

CONTRACTING AGENCY: FEDERAL SECURITY AGENCY, PUBLIC HEALTH SERVICE

TITLE OF PROJECT:

Special Aspects of Lipid Metabolism in Man and Animals with Portal-Caval Shunts

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Mary Ann Payne, PhD., M.D.

Instructor in Medicine - Cornell University Medical College
Physician to Out Patient Department - New York Hospital

NAME AND ADDRESS OF INSTITUTION:

New York Hospital-Cornell Medical Center, 525 East 68th Street, New York 21, N.Y.

APPLICANT — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. App.
~~A 181~~	~~9/1/50 - 8/31/51~~	~~$6,421~~
181 C1	9/1/51 - 8/31/52	7,231
181 C2	9/1/52 - 8/31/53	8,095

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data)

In the Program of Exchange of Information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Using the radio-active isotope P^{32}, phospholipid turnover will be measured before and at intervals after portal-caval shunts in man and in dogs. The effect of hepatic artery ligation, hepatic vein occlusion, ligation of the biliary tree and of the lymphatic vessels will be investigated. Phospholipid determinations of hepatic vein and portal vein blood will be obtained by catheterization in patients with portal-caval shunts.

SIGNATURE OF PRINCIPAL INVESTIGATOR

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NOTICE OF RESEARCH PROJECT
Bio Sciences Information Exchange
Not for Publication

Project No. A 228 C1
Biochem (5)

Supporting Agency: Public Health Service

Title of Project: "X-Ray Crystal Analyses of Metabolic Factors and Other Biochemicals of Medical Importance"

Professional Personnel: Dr. Ray Pepinsky, Physics Dept., Research Prof., X-Ray Laboratory
Mr. P. F. Eiland, Physics Dept., Research Associate in X-Ray Analysis
Dr. E. Tavora, Physics Dept., Research Associate in X-Ray Analysis
Dr. T. Watanabe, Physics Dept., Research Associate in X-Ray Analysis
Dr. Klaas Eriks, Physics Dept., Research Associate in X-Ray Analysis
Dr. F. Shafisadeh, Physics Dept., Research Associate in Biochemistry.
Dr. J. Baecklund, Physics Dept., Research Associate on Computer Program
Mr. Paul Jarmots, Physics Dept. Research Associate on Computer Program

Name of Institution: The Pennsylvania State College, State College, Pennsylvania

Summary of Proposed Work:

Support is requested for a program of X-ray crystal structure analyses of metabolic factors such as the citrovorum factor, vitamin B_{12} derivatives and fragments, and cis-trans isomers of pyridyl antihistamines. The purpose of these analyses is the elucidation of the precise molecular structures in cases where these have not yet been obtainable by usual chemical means, or where spatial configurations appear to have particular biochemical significance. The procedure followed involves the use of heavy atom derivatives, and, where possible, the isomorphous replacement technique. Considerable progress has already been made on the antihistamine structure; very much effort has been expended on intact B_{12} molecules, but it is felt that this structure must be attacked by way of isomorphous derivatives and fragments of the entire molecule.

Crystallographic calculations in three dimensions are carried out on the highspeed electronic computers X-RAC and S-FAC, under a program supported by an Office of Naval Research Contract, No. N6onr-26916, T.O. 16. Choice of compounds and preparation of crystalline derivatives are in the hands of competent biochemists, under a further supporting program financed by a Rockefeller Foundation grant.

Grant No.	Period of Operation	Amt. App.
A 228	9/52 - 8/53	$30,000
228 C1	9/53 - 8/54	30,000

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Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A 228(C2)
Bio (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

X-Ray Analyses of Metabolic Factors and other Biochemicals of Medical Importance

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Ray Pepinsky, Department of Physics, Research Professor, Dir. X-Ray Cryst. Anal. Lab.
Jean L. A.Toussaint, Department of Physics, Research Associate
Vladimir Vand, Department of Physics, Research Associate
Philip Frank Eiland, Department of Physics, Research Associate
Yoshiharu Okaya, Department of Physics, Research Associate
K. Hoogstoen, Department of Physics, Research Associate
June Turley, Department of Physics, Research Assistant
Fraidoun Shafizadeh, Department of Physics, Research Associate

NAME AND ADDRESS OF APPLICANT INSTITUTION:

The Pennsylvania State University, State College, Pa.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Continuation of a program for X-ray crystal structure analyses of metabolic factors and other biochemicals of medical importance is proposed. The X-ray technique is applied to molecular structures not elucidated by usual chemical methods, or in cases where spatial configurations may have specific biological importance. The procedure involves the use of heavy atom derivatives and, where possible, the isomorphous replacement technique; analytical methods for phase determination, based upon non-negativity and atomicity of electron distributions, statistical relations between scattering factors, and image-seeking methods for interpretation of Patterson functions are applied insofar as feasible. Unless they are obviously unnecessary, full three-dimensional methods are utilized. Evaluation and further development of phase-determining methods are carried on as a fundamental part of the program.

Compounds presently under examination include jervine and veratramine, solanum alkaloids, and ergot fragments; thioctic acid, radicinin, fradicin, nocardamin, castoramine, and streptamine; aureomycin, terramycin, achromycin, and neomycin; phenyl-pyrimidine antimalarials; and asparagine. Other crystalline compounds are available, and more are being sought.

Choice of biochemicals and crystal preparation are in the hands of a competent biochemist, under a program supported by a Rockefeller Foundation grant. Crystallographic computations on X-RAC and S-FAC are supported under a contract with the Office of Naval Research.

SIGNATURE OF PRINCIPAL INVESTIGATOR Ray Pepinsky

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL College of Chemistry and Physics

Grant No.	Period of Operation	Amt. Appr.
A-228	9/52 - 8/53	$30,000
228 C1	9/53 - 8/54	30,000
228 C2	9/54 - 8/55	36,039
228 C3	9/55 - 8/56	36,039 *
A-228 C4	9/56 - 8/57	$36,039 *
228 C5	9/57 - 8/58	36,039 *
228 C6	9/58 - 8/59	36,039 *

* Commitment

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-245 (C4)
Endo (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md. PRELIMINARY

TITLE OF PROJECT:

The Effect of Purified Crystalline Growth Hormone on the Metabolism of Normal Human Beings.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Philip K. Bondy, M.D. - Assoc. Professor of Medicine - Dept. of Medicine
Seymour R. Lipsky, M.D. - Asst. Professor of Medicine - Dept. of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Yale University - New Haven, Connecticut

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Fat depots will be labeled by preliminary incorporation of tritium-labeled water into the dietary intake of normal human beings. Following this, flash labeling with C^{14}-labeled acetate will be used to compare the disappearance curves and turnover rates of depot vs. newly synthesized fat. This pattern will be compared in normal individuals and in individuals previously treated with crystalline growth hormone preparations. It is hoped that information may be obtained regarding the regulatory effect of growth hormone upon the rate of synthesis of new fatty acids and upon the mobilization and turnover of depot fat.

SIGNATURE OF PRINCIPAL INVESTIGATOR Philip K. Bondy, M.D.

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Yale University School of Medicine

INVESTIGATOR — DO NOT USE THIS SPACE

PENDING - JUNE 1956 COUNCIL

PHS-166
REV. 10-57

Form Approved
Budget Bureau No. 92-R001.2

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NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
B-114
Physio. (1)

CONTRACTING AGENCY: FEDERAL SECURITY AGENCY. PUBLIC HEALTH SERVICE

TITLE OF PROJECT:

Use of Radioactive Diiodofluorescein and Potassium in the Study of Vascular, Degenerative, and Neoplastic Diseases of the Central Nervous System.

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Thomas W. Farmer, M.D.	Associate Prof. of Neurology	Department of Neuropsychiatry
Henry Laas, PhD.	Clin.Asso.Prof.Med.Physics	Department of Medicine
Ralph S. Clayton, M.D.	Clin.Asst.Prof.Radiology	Department of Radiology
Mrs. Carol Morgan	Assistant in Neurology	Department of Neuropsychiatry

NAME AND ADDRESS OF INSTITUTION:

Southwestern Medical School of The University of Texas
2211 Oak Lawn Avenue, Dallas 4, Texas

APPLICANT — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. App.
B 114	9/1/51 - 8/31/52	$ 8,996

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data)

In the Program of Exchange of Information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

It is proposed to study the concentration of radioactive substances (diiodofluorescein and potassium) in patients with various types of cerebral and spinal cord disorders to obtain more fundamental knowledge concerning the physiology of the following pathologic processes:

1. Non-neoplastic disorders. An initial pilot study of patients with the following types of neurologic disorders is planned: infectious, demyelinating, vascular and traumatic processes. Following the results of these preliminary studies more extensive investigation of one or more of these processes will be pursued.

2. Cerebral neoplasms. These isotope studies will provide correlation in further detail of the concentration of I_{131} and K_{42} with the histologic lesions. The effects of previous exposure of the brain to deep x-ray therapy, which may increase the accuracy of localization will also be pursued.

In the studies with diiodofluorescein the technics to be employed are essentially those of Davis et al. The methods developed by Selverstone will be used in the study of potassium.

Patients studied with these radioisotopes in this manner will also be studied with the standard methods of neurologic diagnosis, including electroencephalography, pneumoencephalography, arteriography, surgical and pathological studies. All of these methods will be correlated.

SIGNATURE OF PRINCIPAL INVESTIGATOR

PHS-166-1 (BG) REV. 6-49
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FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
B-157(C2)
Neuro (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

Investigation of the Dynamics of Water, and Ionic Exchange in the Central Nervous System and Cerebrospinal Fluid.

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Dr. Edgar A. Bering, Jr., Assistant Neurosurgeon

NAME AND ADDRESS OF APPLICANT INSTITUTION

Children's Medical Center, 300 Longwood Avenue, Boston 15, Massachusetts

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The investigation of ionic exchange between the blood, the CSF and CNS is being carried out using D_2O, Na^{24}, K^{42} and iodinated serum albumen as tracer substances. The experiments generally follow the pattern of an intravenous injection of the tracer followed by appropriate sampling of the blood, the CSF from cerebral ventricles, cisterna magna, spinal subarachnoid space and CNS tissue. Studies on the total accumulation of CSF are being made as well as the tracer studies. Experiments are being carried out in animals and in patients undergoing neurological investigation.

In order to evaluate the role of the choroid plexus in the tracer exchange between the blood and CSF a series of experiments has been started in dogs studying the tracer exchange before and after choroid plexectomy. In these animals total CSF accumulation is also measured before and after plexectomy.

SIGNATURE OF PRINCIPAL INVESTIGATOR Edgar A Bering Jr

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

Grant No.	Period of Operation	Amt. App.
B-157	12/51 - 11/52	4,320
157 C1	12/52 - 11/53	4,000
157 C2	12/53 - 11/54	4,000

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HEALTH EDUCATION AND WELFARE
FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space) #
B-157(C3)
Neuro (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Investigation of The Dynamics of Water and Ionic Exchange in the Central Nervous System and Cerebrospinal Fluid

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Edgar A. Bering, Jr. - Assistant Neurosurgeon, Children's Medical Center
Boston, Massachusetts

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Children's Medical Center, 300 Longwood Avenue, Boston, 15, Massachusetts

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The exchange of various ions and molecules between blood, brain, and cerebrospinal fluid is being studied using radio and stable isotopes as tracers. These studies are carried out in normal and hydrocephalic patients. In order to assess the action of the choroid plexus, these exchanges are studied in dogs before and after choroid plexectomy.

The accumulation of cerebrospinal fluid is not the same as nor is it measured by the tracer exchanges. In order to measure this, studies have been carried out on patients and animals on ventricular drainage. These studies are made before and after choroid plexectomy.

The importance of an intact subarachnoid pathway for the escape of various substances is being studied with both electrolyte, protein, and water tracers.

Beginning-December 1955

SIGNATURE OF PRINCIPAL INVESTIGATOR Edgar A. Bering Jr.

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
B-157	12/51 - 11/52	$4,320
157 C1	12/52 - 11/53	4,000
B-157 C2	12/53 - 11/54	$4,000
157 C3	12/54 - 11/55	11,623
157 C4	12/55 - 11/56	11,000 *

* Commitment

PHS 416
REV 11-52

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Budget Bureau No. 92-R001.2

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DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
B-157(C4)
Neuro (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Investigation of the Dynamics of Water, and Ionic Exchange in the Central Nervous System and Ceretrospinal Fluid.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Edgar A. Bering, Jr., M.D. Associate Neurosurgeon

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Children's Medical Center, 300 Longwood Avenue, Boston, Massachusetts

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The exchange between blood and CSF of various ions and substances has been studied. It is apparent that the various components of CSF move at there own rates dictated by the characteristics of their physiological processes. The accumulation of CSF is a separate phenomenon and must be treated as such.

Tracer exchanges using D_2O, Na^{24}, K^{42}, and I^{131} tagged albumin have been or are being carried on in man and animals to determine the role of the choroid plexuses in these exchanges.

Studies on accumulation of CSF are being carried out as a separate series of experiments. This is being done by observing the rate of CSF production in patients and animals undergoing ventricular drainage before and after choroid plexectomy.

A detailed study of the components of CSF during changes in blood osmotic pressure is being made.

SIGNATURE OF PRINCIPAL INVESTIGATOR Edgar A. Bering, Jr.

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

Submitted for period beginning-December 1955 --

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
B-157	12/51 - 11/52	$4,320	B-157 C3	12/54 - 11/55	$11,623
157 C1	12/52 - 11/53	4,000	157 C4	12/55 - 11/56	11,712
157 C2	12/53 - 11/54	4,000			

PHS-166
REV. 5-54

Form Approved
Budget Bureau No. 92-R001.2

NOTICE OF RESEARCH PROJECT
Bio Sciences Information Exchange
Not for Publication

COPY

Project No. B-188 R
S. D. (1)

Supporting Agency: Public Health Service

Title of Project: "The Application of Radioactive Isotopes to Pathological Conditions of the Eye. a. Uptake of radioactive material by ocular tumors b. Effect of radioactive isotopes upon corneal vascularization (Beta radiation)

Professional Personnel: Charles I. Thomas, M.D., Dept. of Ophthalmology, Asst. Clinical Professor
H. L. Friedell, M.D., Dept. of Radiology, Professor
L. V. Johnson, M.D., Dept. of Ophthalmology, Associate Professor

Name of Institution: Western Reserve University, Cleveland, Ohio

Summary of proposed work:

The production of experimental ocular tumors in animals, and by investigating the amount of uptake of radioactive material this tissue exhibits in comparison to normal, uninvolved ocular tissue. Also to be determined is whether or not this uptake is related to cell type or degree of vascularization presented by the tumor tissue. Control experiments can be done on animals by investigating the uptake of radioactive substances by tissues under normal circumstances. Both in vivo and in vitro measurements can be obtained by the Geiger counting probe and counting chamber.

Preliminary work has already been done on the construction of a scintillation counter for the application of this problem to tumors of posterior segment of the eye. Further investigation needs to be carried out to properly construct this counter and make it practical clinically.

To study the effect upon vascularization of radioactive isotopes, the cornea offers a suitable site. Vascularization can be produced by inducing an inflammatory lesion. An acceptable beta ray emitter is available in Strontium 90. This can be obtained in a suitable applicator and its effect can be studied by direct contact to the vascularized lesion.

Grant No.	Period of Operation	Amt. App.
B-188	9/53 - 8/54	$11,987
188 C1	9/54 - 8/55	12,000 *

* Committed

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FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
B-188(C2)
S.D. (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

The Application of Radioactive Isotopes to Pathological Conditions of the Eye.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Principal Investigator	Charles I Thomas, M.D.
Consultant	H. L. Friedell, M.D.
Consultant	L. V. Johnson, M.D.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

WEstern Reserve University - 2040 Adelbert Road - Cleveland 6, Ohio

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

This investigation of Radioactive Phosphorus uptake in normal and tumor tissue is being carried out according to the following outline:

Clinical Investigation:

1. Comparative studies of both normal uptake of P-32, and that shown by various forms of intraocular tumors.
2. Analysis of the P-32 uptake by in vitro studies.
3. Fractionation studies to determine the site of P-32 in the metabolic system.

Experimental Investigation:

1. Transplantation of neoplastic tissue into the intraocular structure of animals to afford a basis for metabolic studies of these tumors.
2. Determination of the influence of the vascular pattern upon the uptake of P-32 in intraocular tumors. This is being carried out by the following methods:

SIGNATURE OF PRINCIPAL INVESTIGATOR: Charles I Thomas

Submitted for period beginning-September 1955

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Western Reserve University

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
B-188	9/53 - 8/54	$11,987	B-188 C2	9/55 - 8/56	$12,777
188 C1	9/54 - 8/55	12,000	188 C3	9/56 - 8/57	~~12,000~~ * 12,777

* Commitment

PHS 166
REV. 10-52

Form Approved
Budget Bureau No. 92-R021.2

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DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
B-188(C3)
S D (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

PRELIMINARY

TITLE OF PROJECT:

The Application of Radioactive Isotopes to Pathological Conditions of the Eye.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Charles I Thomas, M. D. Associate Clinical Professor of Ophthalmology
Department of Surgery, Western Reserve University

H. L. Friedell, M. D. Professor of Radiology
Department of Radiology, Western Reserve University

L. V. Johnson, M. D. Associate Professor of Ophthalmology
Department of Surgery, Western Reserve University

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Western Reserve University

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio-Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

An Adequate supply of neoplasms of both the auto- and hetero-transplant types has been obtained to carry out the investigation of uptake of radioactive phosphorus by neoplastic tissue.

The affect of vascularity upon the uptake of P^{32} by neoplastic tissue

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
B-206(C2)

No S.S. (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT: A national survey of state laws and administrative practices effecting epileptics

~~SUPPORT FROM THIS SOURCE TERMINATED~~

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Principal investigator, Dr. Howard D. Fabing, 2314 Auburn Avenue, Cincinnati 19, Chio, Chairman, Legislation Committee, American League Against Epilepsy. Other professional personnel: Roscoe L. Barrow, Dean, University of Cincinnati, College of Law; Professor Fred A. Dewey, Assistant Professor Charles E. Stevenson: Assistant Professor Robert A. Mace; all of the University of Cincinnati College of Law.

NAME AND ADDRESS OF APPLICANT INSTITUTION: Legislation Committee, American League Against Epilepsy, c/o Howard D. Fabing,M.D., 2314 Auburn Ave., Cincinnati 19, Ohio

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The purpose of this project is to lay a foundation for the enactment of laws which will enable epileptics to live normal, useful lives. Recent medical progress in the treatment of epilepsy, effecting control of seizures with anti-convulsants, has made it possible for 80 percent of epileptics to live a normal, useful life. However, the social stigma attaching to epileptics forces them to become wards of society. Perpetuating this stigma are our laws, which are highly discriminating against epileptics. Approximately half the states prohibit marriage of epileptics and and provide for sterilization of epileptics, and in some states marriage of an epileptic is a crime. These statutes are prompted by eugenics motives. However, the eugenics basis of the statutes is deemed by physicians to be unsound. While the privilege of driving a motor vehicle is of great importance in the adjustment of the epileptic, forty-seven of the states severely limit this right. In some states, a history of seizures is an absolute bar to grant of a license and medical opinion is not utilized in appraising the symptoms of epilepsy. Only sixteen states give weight to medical control of seizures. While employment is necessary to the rehabilitation of the epileptic, there is strong resistance by employers to hiring epileptics. Workmen's Compensation Laws tend to discourage employment of epileptics. They could be amended to encourage employment of epileptics at no social cost. The proposed project would determine those changes in laws of the type mentioned justified by modern medical knowledge regarding epilepsy.

SIGNATURE OF PRINCIPAL INVESTIGATOR Howard D. Fabing, M.D.

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
B-206	4/53 - 3/54	$5,000
206 C1	4/54 - 3/55	5,000
206 C2	4/55 - ~~3/56~~ 12/56	8,000

~~SUPPORT FROM THIS SOURCE TERMINATED~~

PHS-166
REV. 10-52

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PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

B-206 (C)
N.S.S. (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bet

TITLE OF PROJECT

A National Survey of State Laws Concerning Legal Rights of Epileptics

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Principal Investigator: Howard D. Fabing, M. D., Chairman, Legislation Committee, American League Against Epilepsy.

Supervisor of legal research: Roscoe L. Barrow, Dean, University of Cincinnati College of Law.

Other professional personnel: Members of the University of Cincinnati College of Law faculty, on a part time basis as needed.

NAME AND ADDRESS OF APPLICANT INSTITUTION

American League Against Epilepsy

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for those purposes.

The purpose of this project is to lay a foundation for the enactment of laws which will enable persons having a history of seizures to live normal, useful lives. Statutes, judicial decisions and administrative practices in each state, territory and the federal government will be studied to ascertain the present status of epileptics. Employment practices of private industry will be studied to ascertain the extent of, and reasons for, the resistance to employment of epileptics. Existing laws, administrative practices and employment practices severely limit the opportunities for epileptics to lead normal, useful lives. For example, laws providing for the sterilization of epileptics and prohibiting the issuance of marriage licenses to epileptics are wide-spread. The basic premise of these laws, that epilepsy is genetic and inheritable is questionable, and the laws do not establish criteria for distinguishing between those with acquired and idiopathic seizures. Most states prohibit the issuance of drivers' licenses to epileptics even though a physician may certify that the patient's seizures are under control. Laws for commitment of epileptics ordinarily apply also to the mentally ill and the mentally defective, with the result that epileptics are frequently treated as insane or feeble-minded. Failure of Workmen's Compensation Laws to relieve employers of epileptics of direct liability for injuries resulting from seizures increases resistance to employment of epileptics. Upon completion of the survey, model statutes will be drafted and, through education and the aid of groups interested in the handicapped and in securing uniformity in state laws, it is hoped that the laws relating to epileptics will be brought into line with medical progress in the control of seizures.

SIGNATURE OF PRINCIPAL INVESTIGATOR

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

Howard D. Fabing, M.D.

Grant No.	Period of Operation	Amt. App.
B-206	4/53 - 3/54	$5,000
206 C1	4/54 - 3/55	5,000

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PHS-166-1(RG)
Rev. 8-51

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NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)

B 212

Physiol. (1)

CONTRACTING AGENCY: FEDERAL SECURITY AGENCY: PUBLIC HEALTH SERVICE

TITLE OF PROJECT:

Study of the Blood-Brain Barrier with Radioactive and Stable Isotopes

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

James C. White, M.D., Chief of Neurosurgery

Louis Bakay, M.D., Assistant in Neurosurgery

NAME AND ADDRESS OF INSTITUTION:

Massachusetts General Hospital, Boston 14, Mass.

APPLICANT — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. App.
B 212	6/23/52 - 6/30/53	$10,535

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data)

In the Program of Exchange of Information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Injections of various radioactive and stable isotopes into the blood circulation as well as into the cerebrospinal fluid of various animals in amounts proportionate to the total volume of these body fluids are planned. Comparing the amount of the tracers incorporated in various parts of the brain, the difference between the amount of the isotope which the brain incorporates from the blood circulation and the amount it is capable of incorporating if the blood-brain barrier is by-passed can be calculated. A quantitative analysis of the permeability of the barrier to different tracers is contemplated. This basic information will be completed by the study of areas of the brain where the permeability of the barrier is increased under physiological conditions and by experiments causing pathological changes in the barrier.

SIGNATURE OF PRINCIPAL INVESTIGATOR

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PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-355(& C1 #
(5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

STUDY OF OSTEOPOROSIS

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

H. Spencer, M.D. Associate Attending Physician, Principal Investigator, Div. of Neop. Dis.
D. Laszlo, M.D. Chief, Division of Neoplastic Diseases
H.E. Hart, Physicist, Division of Neoplastic Diseases
J. Samachson, Ph.D. Chemist (beginning C1)
E.D. Gottesman, Research Dietitian, Metabolic Research Ward.
Mary Perrone, R.N. Metabolic Research Ward (Original only)

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Montefiore Hospital, 210th Street & Bainbridge Avenue, Bronx, 67, New York.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Measurement of calcium retention by the calcium tolerance test and the effects of therapy thereon. Utilization of dietary calcium as measured by the metabolic balance techniques and comparison of utilization and retention of intravenously administered calcium. Measurement of utilization by the radiocalcium technique. Determination of plasma disappearance rates of Ca^{45} in patients with osteoporosis and of the labile calcium pool. Determination of digestive juice calcium, endogenous fecal calcium by the radiocalcium technique. Strontium metabolism in osteoporosis as studied by $Strontium^{85}$ as the tracer. Comparison of radiocalcium and radiostrontium metabolism in patients with osteoporosis and the effects of dietary calcium and strontium thereon. Evaluation of therapeutic agents using the techniques of the calcium tolerance test, radiocalcium, radiostrontium and of metabolic balances.

Resubmitted for period beginning-April 1956

SIGNATURE OF PRINCIPAL INVESTIGATOR Helen Spencer, M.D.

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-855	4/55 - 3/56	$12,960
855 C1	4/56 - 3/57	13,800
855 C2	4/57 - 3/58	13,800 *

* Commitment

PHS 166
REV. 10-52

Form Approved
Budget Bureau No. 72-R004.2

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-882
P.E.T.(1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Role of Amines in Allergy and Inflammation

Support from this source terminated 6/55

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Richard W. Schayer, Ph. D., Research Associate

Yutaka Kobayashi, Ph. D., Research Associate

NAME AND ADDRESS OF APPLICANT INSTITUTION:
Rheumatic Fever Research Institute - 3026 S. California Avenue
Northwestern University Medical School - Chicago, Illinois

SUMMARY OF PROPOSED WORK -- (200 words or less -- Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Studies of the mechanism of binding and release of histamine in intact animals and in vitro; means of influencing these reactions; role of histamine release in allergy and inflammation. Resolution of C^{14} dl-norepinephrine, metabolic studies; inhibition of epinephrine metabolism in vivo. Attempt to devise specific analytical techniques for epinephrine, norepinephrine, tyramine, tryptamine, phenylethylamine, and isoamylamine by conversion to radioactive derivatives. Study of their role in normal tissues and in allergic and inflammatory conditions.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Richard W. Schayer

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL: Medical

Submitted for period beginning -- June 1955

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-882	6/1/55 - 6/30/55	$14,904

Support from this source terminated 6/55

PHS 346
Rev. 1956

Form Approved
Budget Bureau No. 72-R01.2

Prepared for the Bio Sciences Information Exchange.
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DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-962 (C)
PHYSIO (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Effect of ACTH or adrenocortical oxysteroids on hepatic secretory function in man

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. Franz J. Ingelfinger, Associate Professor of Medicine, BUSM *
Dr. Philip Kramer, Instructor in Medicine, BUSM
Dr. Edwin Englert, Jr., Fellow in Gastroenterology, BUSM

* BUSM = Boston University School of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Massachusetts Memorial Hospitals - Department of Medicine
75 Harrison Avenue, Boston 18, Massachusetts

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

A study to determine the effect of ACTH or adrenocortical oxysteroids on hepatic secretory function was begun one year ago and is continuing.

Studies thus far indicate that BSP clearance is unaffected by intravenous infusion of ACTH or hydrocortisone. In subjects given cortisone orally over a period of three to five days, the BSP clearance either remains the same or decreases, sometimes markedly. Similar results have been obtained with Rose Bengal tagged with I^{131}. The administration of adrenocortical oxysteroids or ACTH also does not appear to influence the flow of bile.

During the coming year, these studies will continue. Additional studies planned are measurements of the effects of the hormones on intravenous cholangiography and on the effects of sodium dehydrocholate on hepatic secretory function.

Although up to the present no evidence has been found to indicate that adrenocortical oxysteroids act as cholagogues in subjects without jaundice, it is proposed to continue studies of the three aspects of hepatic secretory function: hepatic uptake from the blood of substances secreted by the liver, storage time in the liver, and secretion in the bile.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Boston University School of Medicine

INVESTIGATOR — DO NOT USE THIS SPACE

PENDING - JUNE 1956 COUNCIL

PHS-166

Form Approved

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
A-1015(C)
RAD (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

Effect of X-Irradiation on the Gastrointestinal Tract Function in Humans and Large Laboratory Mammals.

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Arthur B. French, M.D. - Principal Investigator, Associate Professor of Medicine and Director of Clinical Cancer Research, Wayne University College of Medicine, Detroit Receiving Hospital.

Makoto Ishikawa, M.D. - Research Fellow in Medicine, Wayne University College of Medicine, Detroit Receiving Hospital.

NAME AND ADDRESS OF APPLICANT INSTITUTION

Wayne University College of Medicine
1401 Rivard Street, Detroit 7, Michigan.

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The effect of X-irradiation on gastrointestinal tract function will be studied in humans, dogs and monkeys. Intestinal motility will be estimated from intraluminal pressure recordings and barium transit times within the various gut segments. An attempt will be made to correlate any motility changes with the nausea and vomiting of early radiation sickness. Both time relationships and modifying factors such as drugs and neurological lesions will be observed. The effect of X-irradiation on gastric secretion as reflected in gastric, blood and urinary pepsin will be observed. Relationships between secretory and motor changes and the non-specific stress type phenomena which accompany X-irradiation will be noted. The effect of radiation on pancreatic and biliary secretion will be measured, as well as the effect on intestinal absorption.

SIGNATURE OF PRINCIPAL INVESTIGATOR

NAME OF ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

Wayne University College of Medicine.

(DEPARTMENT)

LEAVE BLANK

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FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-H-1024 (PRELIM)
Hema (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT: **Studies on mechanisms of auto-immunization in acquired hemolytic anemia. Relationship of anti-erythrocytic antibodies to other formed elements of the blood and the fixed tissues.**

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Anthony V. Pisciotta, M. D.
Assistant Professor of Medicine
Department of Internal Medicine
Blood Research Laboratory
Milwaukee County General Hospital

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Marquette University School of Medicine, Milwaukee 3, Wisconsin

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Summary of Proposed Work.

The object of this study is to seek further evidence to relate anti-erythrocytic antibodies and other formed elements of the blood - lymphocytes, platelets, normoblasts, etc. The relationship of the lymphocyte to auto-immune processes will be investigated because of the frequency with which immune hemolytic anemias occur as a complication of lymphocytic proliferative disease. Also, we hope to show whether nucleated erythrocytes share a common agglutinogen with normal erythrocytes, and at what developmental age, agglutinogens appear. The relationship of the normoblasts to pathologic auto-immunization will be investigated, in that auto-immunity might result from faulty synthesis of erythrocytic stromal protein in the developing normoblast.

It may be that cross immunization exists between erythrocytes and these various formed elements. "Tissue antibodies" will be sought by elution and extraction of tissues from patients with auto-immune hemolytic anemia for proteins which could sensitize (coat with globulin) or agglutinate normal erythrocytes.

Finally, the site of destruction of both normal and sensitized erythrocytes will be studied in humans and experimental animals by means of radioactive chromium 51 tagged erythrocytes and perfusion technics. In this study, pooling of radioactivity in specific organs will be sought.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL **Marquette University School of Medicine**

INVESTIGATOR — DO NOT USE THIS SPACE

(PRELIMINARY)

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
AC-1027 (PR ELIM)
Hema. (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Study of B_{12} Stores in Man

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Alexander R. Stevens, Jr. — **Clinical Assistant in Medicine**

Clement A. Finch, M. D. — **Associate Professor of Medicine**

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Washington School of Medicine, Department of Medicine, Seattle, Wash.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

A study will be made of the rate of turnover of $Co^{60}B_{12}$ in the liver. This is assumed to represent the rate of turnover of B_{12} stores, and evidence will be sought to substantiate this point. The size of B_{12} stores, and factors influencing the rate of utilization of these stores will be studied. An attempt will be made to find a more effective way of loading the individual with B_{12}.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR — DO NOT USE THIS SPACE

(PRELIMINARY)

PHS-166
REV. 5-54

Form Approved
Budget Bureau No. 92-R001.2

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A - 1033
HEM. (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md. (PRELIMINARY)

TITLE OF PROJECT:

The Formation of Various Hemoglobins

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Anthony T. Ladd, M.D., Assistant Professor of Medicine, State University of New York
Chief, Clinical Laboratory, VA Hospital, Syracuse, New York
Executive Secretary, Medical Research Committee, VA Hospital, Syracuse, New York

Charles N. Remy, Ph.D. Instructor, Dept. of Biochemistry, State University of N.Y.
Biochemist, Clinical Laboratory Section, VA Hospital, Syracuse, New York

NAME AND ADDRESS OF APPLICANT INSTITUTION: State University of New York Upstate Medical Center at Syracuse, 766 Irving Avenue, Syracuse, New York

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Comparative rates of synthesis of hemoglobin "A" (normal adult) and hemoglobin "S" (sickle) will be studied in human patients with sickle cell anemia using C^{14} glycine and Fe^{59} as tracers. The labeled hemoglobins will be separated by paper and starch electrophoresis into hemoglobin "A" and "S" fractions. In the case of C^{14} incorporation, the isotope concentration will be determined in both the globin and heme portions. The pattern of incorporation of the isotopes into hemoglobin "A" and "S" will be followed in these patients before, during and after severe attacks of anemia. These studies will be expanded to include the study of various anemias associated with the presence of other atypical hemoglobins.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Anthony T. Ladd
ANTHONY T. LADD, M.D.

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified: SCHOOL State University of New York Upstate Medical Center at Syracuse - College of Medicine.

INVESTIGATOR — DO NOT USE THIS SPACE

(PRELIMINARY)

PHS '66
REV.

Form Approved
Budget Bureau No. 72-R201.1

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

Bio Sciences Information Exchange.
Not for publication or publication reference.

PROJECT NO. (Do not use this space)
A - 1149
HEMA. (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Chronic and Acute Bone Marrow Failure

PRELIMINARY

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Franklin G. Ebaugh, Jr., M.D., Department of Laboratory Medicine, Assistant Professor of Hematology

Joseph R. Bove, M.D., Department of Medicine, Research Fellow of the Hitchcock Foundation

E. Elizabeth French, M.D., Department of Pathology, Instructor in Pathology, Dartmouth Medical School

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Hitchcock Foundation
Hanover, New Hampshire

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

To the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The rate of red cell production will be estimated directly by plasma iron turnover studies and red blood cell incorporation of Fe^{59} and indirectly by blood volume and $Na_2Cr^{51}O_4$ labeled red cell in vivo survival studies. The project will consist of two phases: (1) The perfection of the analysis of red blood cell Cr^{51} survival curves so that more accurate estimates of mean red cell life span can be made, and (2) A search for an inhibitory factor in the plasma of patients with bone marrow failure but morphologically normal marrows.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Franklin G. Ebaugh

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project would be identified:

SCHOOL: Dartmouth Medical School

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

PHS-166

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Not for publication or publication reference.

NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A - 1173

B & N (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Study of Liver Function in Infants and Children PRELIMINARY

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Ruth C. Harris, M.D., Assistant Professor, Department of Pediatrics, Columbia University

NAME AND ADDRESS OF APPLICANT INSTITUTION:

College of Physicians and Surgeons, Columbia University, New York, N. Y.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

For several years we have studied known and new tests for liver function in infants, particularly those under one year of age. Recently this has included study of urine amino acids. At present, such examination has been carried out on several normal infants and on two children with cirrhosis associated with the de Toni-Fanconi syndrome. Also two children with cystinosis and two children with Wilson's disease have been studied, as well as the complete family of one of these latter patients.

Our current plan is to continue study of aminoaciduria in the families of those patients with Wilson's disease; in premature infants during the first week of life with correlation of the findings with serum bilirubin levels, zinc sulfate turbidity and cholesterol esters; in infants with obstructive jaundice, both intra- and extrahepatic type and in patients with unusual metabolic clinical problems.

We are also studying the problems associated with biliary cirrhosis in infants and are currently studying the relation between the ingestion of soybean sitosterol and serum lipid levels. In this regard, we would like to attempt the difficult study of cholesterol manufacture by C^{14}-tagged acetate in liver biopsy slices in normals and patients with various types of obstructive jaundice.

Ruth C. Harris

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Medical

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

PHS 166
REV. 10-52

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PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-1204
HEMA (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT: PRELIMINARY

Radioactive Food-Iron (Fe^{59}) Absorption in Infants and Children

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Jeanette Schulz, M. D., Fellow of Pediatric Hematology, Dept. of Pediatrics
Esthan J. Smith, M. D., Assistant Professor of Pediatrics, Dept. of Pediatrics

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of California at Los Angeles, 405 Hilgard Ave., Los Angeles 24, Calif.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The absorption of iron from naturally-occurring foodstuffs by infants and children is being investigated by incorporating known amounts of radioactive iron (Fe^{59}) into hen's eggs, chicken muscle and liver, green vegetables, and cereals. Eventually cow's milk and human breast milk will be included in the study. Radioactive iron in tracer doses in food is fed to children and the amounts absorbed calculated from determinations of radioactivity in collected feces. Conditions influencing absorption of given amounts of food-iron and hematopoiesis are studied by means of serum iron, free erythrocyte protoporphyrin, serum iron-binding capacity and hematological workup before and after the administration of Fe^{59}.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified: ~~City School of Med~~

SCHOOL Univ. of Calif. at L. A., Sch. of Med.

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

PHS [illegible]
REV [illegible]

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NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

ENDO (7)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

PRELIMINARY

TITLE OF PROJECT:

Effects Of The Prolonged Administration Of Thyroid

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Arthur A. Hellbaum
Professor and Chairman
Department of Pharmacology

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Oklahoma University School of Medicine
801 N. E. 13th. Street
Oklahoma City, Oklahoma

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

This study is to determine the effects of the administration of desiccated thyroid in various dosages during the latter part of the life of aging male rats. The effects to be evaluated include BMR, I_{131} uptake, blood pressure, heart rate, blood cholesterol and lipo-protein patterns, alterations in the gross and microscopic structure of various tissues and organs of the body, and the histochemical study of the ground substance of the coronaries as well as the arterioles in the kidney, liver and pancreas.

In preliminary experiments, in which thyroid was administered at low dosage levels for a 10 months period, the metabolic activity remains significantly higher than the controls, even though endogenous thyroid function was decreased as shown by reduced I_{131} uptake.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Arthur A. Hellbaum

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL: Okla. University School of Medicine

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

PHS 166
REV. 10-52

Form Approved
Budget Bureau No. 92-R001.2

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-1281

Endo (1)

...r for publication or publication reference.

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

PRELIMINARY

TITLE OF PROJECT:

EVALUATION OF MULTIPLE TESTS FOR THYROID FUNCTION

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. Eugene L. Saenger, Director, Radioisotope Laboratory.

Dr. Richard E. Goldsmith, Director, Thyroid Clinic.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

College of Medicine, University of Cincinnati

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The study will evaluate a method of pooling the data of a series of tests using I-131 in determination of thyroid function by a method of rank analysis and in studying the results in untreated patients and in those treated for hyperthyroidism by surgery and I-131. The basal metabolic rate and chemical protein bound iodine tests will be compared with the tests using I-131. The validity of an attempt to eliminate the diagnosis of borderline states of thyroid function will be made.

Since it is necessary to use a group of tests in the determination of thyroid function, this study will evaluate the various tests so that the simplest and most informative method can be used. In the rank analysis weighting factors for the various tests will be derived.

SIGNATURE OF PRINCIPAL INVESTIGATOR Eugene L. Saenger

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Medical

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIM...

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PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-1339

Surg. (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md. PRELIMINARY

TITLE OF PROJECT:

A Study of Bone and Bone Grafting Materials

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Principal Investigator: Robert D. Ray, M.D., Ph.D. Chairman, Department of Orthopaedic

NAME AND ADDRESS OF APPLICANT INSTITUTION:

The Presbyterian Hospital, 1753 West Congress Street, Chicago 12, Illinois

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

It is proposed:

1. To attempt to visualize, by means of time-lapse phase photomicroscopy, the roles played by the cells in bone formation and resorption.
2. To study, by means of Sr^{85} injections into patients and surface counting, the role played by circulation in mineralization and demineralization of the skeleton.
3. To determine, by means of histological and radiographic studies, the effect of cell-free extracts of bone combined with blood on connective tissue metaplasia.
4. To isolate from the organic matrix of bone by biochemical techniques the component most readily replaced by new bone following implantation into bone defects, and to study the chemical and possible antigenic characteristics of this fraction.

SIGNATURE OF PRINCIPAL INVESTIGATOR Robert D. Ray

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Medical

INVESTIGATOR — DO NOT USE THIS SPACE

PENDING - JUNE 1956 COUNCIL

PHS 166

Form Approved

Reference: | NOTICE OF RESEARCH PROJECT | Endo (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

THE STUDY OF PARAMETERS OF THE THYROID GLAND

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

G. L. Brownell, Ph.D.	Assoc. in Physics	Dept. of Medicine
J. B. Stanbury, M.D.	Assoc. in Medicine	Dept. of Medicine
N. Rasmussen, M.D.	Assistant Resident in Med.	Dept. of Medicine
S. Krane, M.D.	Research Assoc. in Medicine	Dept. of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Massachusetts General Hospital
Boston 14, Massachusetts

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The use of tracers in physiological studies has increased greatly the complexity of analysis and interpretation of the data. This project is designed to study the physiology of the thyroid gland using various isotopes and analyzing the data by newer techniques, including the use of an analogue computer. Studies of the fate of I^{131} are being carried out over a three-week period in patients in various states of thyroid activity, and the important parameters determined. Studies of the metabolic fate of Fe^{59} and Ca^{45} are also being carried out in relation to the thyroid status.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

Submitted for period beginning-September 1955

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-446	9/53 - 8/54	$15,880
446 C1	9/54 - 8/55	15,880
446 C2	9/55 - 8/56	16,960

PHS-166
REV. 10-52

Form Approved
Budget Bureau No. 92-R001.2

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-446(03)
Code (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT: PRELIMINARY

STUDY OF PARAMETERS OF THE THYROID GLAND

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Gordon L. Brownell, Ph.D., Associate in Physics, Physics Research Lab.
John B. Stanbury, M.D., Associate in Medicine, Thyroid Laboratory

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Massachusetts General Hospital, Fruit St., Boston, Mass.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The use of tracers in physiological studies has increased greatly the complexity of and interpretation of the data. This project is designed to study the physiology of the thyroid gland using various isotopes and analyzing the data by newer techniques including the use of an analogue computer. Studies of the fate of I^{131} are being carried out over a three-week period in patients in various states of thyroid activity, and the important parameters determined. Studies of the metabolic fate of Fe^{59} and Ca^{45} are also being carried out in relation to the thyroid states.

SIGNATURE OF PRINCIPAL INVESTIGATOR Gordon L. Brownell

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL Harvard Medical School

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

PHS-166
DEV 5-64

Form Approved
Budget Bureau No. 92-R001.2

NOTICE OF RESEARCH PROJECT
Bio Sciences Information Exchange
Not for Publication

Project No. A-451
Endo (1)

Supporting Agency: Public Health Service

Title of Project: Adrenal cortical function and glutathione metabolism

Professional Personnel: Joseph W. Goldzieher, M.D.

Name of Institution: Southwest Foundation for Research and Education, San Antonio, Texas

Summary of proposed work:

To explore, by means of radioactively labelled (S^{35}) glutathione, the relation of sulfur, particularly glutathione sulfur, to the secretory function of the adrenal cortex, and subsequently to influence of adrenal cortical function on the sulfhydryl metabolism of peripheral tissues, both normal and malignant.

Grant No.	Period of Operation	Amt. App.
A 451	9/53 - 8/54	$7,344
451 C1	9/54 - 8/55	~~5,000~~ * 6.858

* Commitment

Not for publication or publication reference.

NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

Fm-10 (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

ADRENAL CORTICAL FUNCTION AND GLUTATHIONE METABOLISM

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Joseph W. Goldzieher, M.D., Chief of Endocrine Laboratory, Southwest Foundation Fore Research and Education, San Antonio, Texas.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Southwest Foundation for Research & Education, Box 2296, San Antonio, Texas

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

We propose to continue studies on the turnover of glutathione in the adrenal and other tissues, under various endocrine influences, as measured by the use of S-35 labelled glutathione.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR — DO NOT USE THIS SPACE

PHS

Form Approved

NOT FOR PUBLICATION OR PUBLICATION REFERENCE

BIO-SCIENCES INFORMATION EXCHANGE
SMITHSONIAN INSTITUTION

PROJECT NO. (Do not use this space)
A-495
Endo. (2)

SUPPORTING AGENCY: Public Health Service

TITLE OF PROJECT:

"Relationship Between Adrenal and Thyroid Function in Normals and in Experimental and Clinical Hyperthyroidism"

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Louis J. Soffer, M.D. - Associate Physician in charge of Endocrinological Research

NAME AND ADDRESS OF INSTITUTION:
The Mount Sinai Hospital, New York, New York

SUMMARY OF PROPOSED WORK— (200 words or less — Omit Confidential data.)

In the Bio-Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in the bio-sciences and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The effect of epinephrine on the secretion of thyrotropin will be studied in the rat. The uptake of I^{131} by the thyroid will be used as a guage for the secretion of pituitary thyrotropin. When such base lines are established, the effects of bilateral adrenalectomy and the use of various adrenal cortical fractions, like desoxycorticosterone, 17-hydroxy-11-dehydrocorticosterone, and 11-dehydrocorticosterone, on the uptake of radioactive iodine by the thyroid following the injection of epinephrine will be studied.

The second phase of the experimental investigation will be concerned with the effect of ACTH in preventing the thyroid hyperplasia which follows the use of the thiourea compounds in the rat. This study will be conducted in both intact and adrenalectomized rats. The effect of 17-hydroxy-11-dehydrocorticosterone will be investigated in a similar manner.

The third phase of this study will be the investigation of adrenal cortical function in patients with hyperthyroidism, and the influence of ACTH both on the clinical course and on the adrenal cortical response in such individuals.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Louis J. Soffer M.D.

Signature of Principal Investigator

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR—DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-495	11/49 - 10/50	$8,310

Form Approved
Budget Bureau No.

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference without consent of the principal investigator.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
A-504
~~Endo~~ (1) M+N

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT
The Relation Between the Disappearance Rate of Labeled Insulin From the Plasma and Its Hypoglycemic Effect in Diabetic Patients

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Robert E Bolinger, M.D., Associate Professor of Medicine
Harold J. Grady, Ph.D., Assistant Professor of Biochemistry and Medicine
Frances N. Lohrenz, M.D., Research Fellow in Medicine (Metabolism)

NAME AND ADDRESS OF APPLICANT INSTITUTION

University of Kansas Medical Center, Kansas City, Kansas

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Diabetic patients can usually be divided into two large groups, one showing insulin sensitivity , ketosis and usually belonging to the younger age group and the other showing relative insulin resistance and normal insulin blood levels, usually belonging to the older age group. It is proposed to study the utilization of insulin in these patients by determining the rate of disappearance of insulin labeled with radioiodine, from the plasma and relating this disappearance rate to the effect of the insulin on the blood glucose levels. The insulin is to be labeled by iodination with radio-iodine, dialysis of the excess radio-iodine, determination of the nitrogen content of the product. Standard doses of insulin, thus labeled, are to be administered intravenously to patients and experimental animals with and without diabetes and samples of blood drawn at intervals analyzed for glucose and for radioactivity, using a windowless gas flow counter. It is also planned to do a statistical evaluation of the insulin tolerance test in normals and diabetics as a baseline for interpretation of the above results

SIGNATURE OF PRINCIPAL INVESTIGATOR Robert E Bolinger

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED. University of Kansas School of Medicine

Grant No.	Period of Operation	Amt. App.
A-504	4/54 - 3/55	$5,076
504 C1	4/55 - 3/56	4,500 *

LEAVE BLANK

* Commitment

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-504(C)
(5) M & N

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

The Relation Between the Disappearance Rate of Labeled Insulin From the Plasma and Its Hypoglycemic Effect in Diabetic Patients

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Robert E. Bolinger, M.D., Principal Investigator

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Kansas, Kansas City, Kansas

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The present work is designed to study the distribution and plasma disappearance rates of insulin labeled with I 131. The effect of impaired function of the liver and kidney on the disappearance rates of the labeled material is being studied in experimental animals, subjected to experimental carbon tetrachloride poisoning, and to experimental ablation of the organs in question. These parameters are also being studied in animals subjected to experimental diabetes. The plasma insulin disappearance is also being studied in diabetic patients with particular attention to any differences between insulin sensitive and insulin resistent patients. End window Geiger counting is carried out on zinc hydroxide precipitates of the plasma. Experiments are planned in animals to study the effects of corticotrophin and somatotrophin on these parameters of insulin disappearance.

information exchange.
Not for publication or publication reference without consent of the principal investigator.

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-504(C2)

M & N (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

The Relation Between the Disappearance Rate of Labeled Insulin From the Plasma and Its Hypoglycemic Effect in Diabetic Patients

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Robert E Bolinger, M.D., Associate Professor of Medicine, Department of Medicine, University of Kansas School of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION

University of Kansas School of Medicine, Kansas City, Kansas

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Most of the work on this project so far has been directed toward developing reliable preparations of labeled insulin and developing the technics for using them in clinical studies. It is the intent of the investigator to further pursue the clinical studies on the disappearance rate of labeled insulin from the plasma in normal patients and compare these results with those found in diabetic patients. One field that is to be studied in particular is that of finding any difference in the disappearance pattern of hte labeled insulin , in so-called mild diabetics as compared to the severe ones. The study of the dynamics of insulin metabolism with the labeled material should be applied in particular to the relatively insulin resistent patient. Another feature which is to be investigated by this technic is the handling of insulin by the kidney both in patients with and without diabetic nephropathy. Further animal studies are to be carried out to study the clearance of the labeled material by the kidney and if rewarding, these will be extended to patient groups. Further work is also planned to study the factors influencing the labeling of the insulin

Submitted for period beginning - April 1956

SIGNATURE OF PRINCIPAL INVESTIGATOR

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

Department of Medicine, University of Kansas School of Medicine

Grant No.	Period of Operation	Amount Approved
A 504	4/54 - 3/55	$5,076
504 C1	4/55 - 3/56	4,482

LEAVE BLANK

504 C2	4/56 - 3/57	7,475

NOT FOR PUBLICATION OR PUBLICATION REFERENCE

BIO-SCIENCES INFORMATION EXCHANGE
SMITHSONIAN INSTITUTION

PROJECT NO. (Do not use this space)
A-507 C1
M & N (5)

SUPPORTING AGENCY: Public Health Service

Support From This Source Terminated 12/55

TITLE OF PROJECT:
"The Influence of the Gastric Mucus Substances on the Ionization and Absorption of Dietary Iron"

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Stewart G. Wolf, Jr., M.D., Professor and Head, Department of Medicine (Principal Investigator)
Robert M. Bird, M.D., Associate Professor of Medicine (Associate Investigator)
John P. Colmore, M.D., Assistant Professor of Medicine (Associate Investigator)
Ramwel Caputto, M.D., Biochemist, Department of Medicine (Associate Investigator)
Charles D. Kochakian, Ph.D., Coordinator of Research and Chief of the Section on Biochemistry and Endocrinology, Okla. Medical Research Foundation. Professor of Research Biochemistry (Consultant)

NAME AND ADDRESS OF INSTITUTION:
University of Oklahoma School of Medicine, Oklahoma City, Oklahoma

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio-Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in the bio-sciences and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The direction of this investigation has been changed because the early phase of the investigation has shown that the gastric proteins do not bind iron. If the gastric proteins are concerned with the absorption of iron it must be by some mechanism other than adsorption. Accordingly, efforts have been made to further refine the large molecular constituents separated from the gastric juice, and biological tests other than iron binding are being attempted. Among these is the readioactive technique for the demonstration of intrinsic factor activity.

DO NOT USE THIS SPACE — MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER WITH WHICH THIS PROJE

Submitted for period beginning - January 1955

SIGNATURE OF PRINCIPAL INVESTIGATOR: Stewart Wolf, M.D.

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:
SCHOOL University of Oklahoma School of Medicine

INVESTIGATOR—DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-507	1/54 - 12/54	$7,500
507 C1	1/55 - 12/55	$7,500

Support From This Source Terminated 12/55

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
A-514
Hema (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

COPY

Quantitative Interpretation of Tracer Iron Data

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Rex L. Huff, M.D., Assistant Professor of Medicine, Department of Medicine, University of Washington School of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION

University of Washington
Seattle 5, Washington

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Attempts are being made with the use of iron 59 to calculate synthesis rates of the various iron containing compounds in the body. Data collected from blood and tissue sampling of man and lower animals, as well as data from body surface counting, will be fitted, and rate constants calculated by means of servo and hydraulic models. This method will be applied particularly to hemoglobin synthesis rates.

SIGNATURE OF PRINCIPAL INVESTIGATOR Rex L. Huff (MD)

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED. Beginning January 1955

Medical

Grant No.	Period of Operation	Amt. App.
A-514	1/54 - 12/54	$13,365
514 C1	1/55 - 12/55	~~8,500~~ * 8,446

LEAVE BLANK

514 C2	1/56 - 12/56	8,500 *

* Commitment

Not for publication or publication reference.

NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

Hama. (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Quantitative Interpretation of Tracer Iron Data

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Rex L. Huff, M.D., Assistant Professor of Medicine
Department of Medicine
University of Washington School of Medicine
Seattle 5, Washington

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Washington, Seattle, Washington

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Iron 59 will be administered by single intravenous injection to men and animals. The amount of iron 59 as a function of time in red cells, hemoglobin, and plasma will be determined. Where appropriate and possible, tissue biopsy of marrow, liver, spleen or muscle, will be carried out in order to determine the iron and iron 59 content of these tissues. Where useful, body surface counting rates will be recorded as a function of time. This data will be graphically analyzed and stated in the form of polynomials of exponentials. From present theory of iron metabolism, models will be postulated and attempts will then be made by the use of an analogue computer and function generator to simulate the accumulated data on the basis of the postulated models. The general objective of this study is to gain qualitative and quantitative information concerning iron metabolism.

Approved for the School of Medicine.

Submitted for period beginning January 1955

Date — Dean

SIGNATURE OF PRINCIPAL INVESTIGATOR: Rex L. Huff MD

SIGNATURE OF ... Identify the ... (medical, dental, public health, graduate, or other) with which ... SCHOOL University of Washington, Seattle, Wa.

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-514	1/54 - 12/54	$13,365
514 C1	1/55 - 12/55	10,696
514 C2	1/56 - 12/56	8,500 *

* Commitment

PHS-166

Form Approved

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-515
Page (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Iron and Hemoglobin Metabolism in the Mother and Her Child.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Principle Investigator: Curtis J. Lund, M.D. Professor of Obstetrics & Gynecology
Associate Investigator: Thomas Sisson, M.D. Instructor in Pediatrics (Part time)
Consultants: Lawrence Young, M.D. Assoc. Prof. Medicine
Scott Swisher, M.D. Asst. Prof. Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Rochester School of Medicine & Dentistry

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

A study of iron metabolism during pregnancy utilizing newer biochemical technics. Special attention will be focused upon the total hemoglobin mass of the pregnant mother under conditions of low, average and high iron intake and its effect upon the iron and hemoglobin metabolism of her newlyborn child, mature or premature, during the neonatal period and the first year of life.

A second phase of this study will be the effects of blood transfusions upon the course of iron deficiency anemia of pregnancy with attention to the therapeutic responsiveness of the bone marrow.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

Submitted for period beginning - July 1953

Submitted for period beginning - January 1954

Grant No.	Period of Operation	Amt. Appr.
A-515	1/54 - 6/55	$12,103
515 C1	7/55 - 6/56	11,500 *

Grant No.	Period of Operation	Amt. Appr.
A-515 C2	7/56 - 6/57	$11,500 *
515 C3	7/57 - 6/58	11,000 *

* Commitment

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-515(C)

Hema (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Iron and Hemoglobin Metabolism in the Mother and Her Child.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Curtis J. Lund, M.D. Professor of Obstetrics & Gynecology.

Thomas R. C. Sisson, M.D. Instructor in Pediatrics.

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Rochester School of Medicine & Dentistry
260 Crittenden Boulevard Rochester, New York

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

We are continuing the study of maternal anemia and its effect on the newborn infant during the first year of life. Special attention is focused upon iron metabolism, plasma volume and total hemoglobin mass in normal and anemic mothers and their infants. In addition these studies will include certain patients with placenta previa, premature separation of the placenta, diabetes, Rh isoimmunization and toxemias of pregnancy.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Curtis J. Lund

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL: Medical

Submitted for period beginning- July 1955

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
A-515	1/54 - 6/55	$12,103	A-515 C2	7/56 - 6/57	~~$11,500~~ * 12,245
515 C1	7/55 - 6/56	12,245	515 C3	7/57 - 6/58	~~11,000~~ *11,712

* Commitment

PHS. 166
REV. 10-52

Form Approved
Budget Bureau No. 92-R001.2

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-579(C)
M & N (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Protein Metabolism in the Stabilized Uremic Subject

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

George E. Schreiner, M.D. Instructor in Medicine, Director, Renal Clinic.
Leonard B. Berman, M.D. - Fellow in Medicine (beginning C2)
Lawrence H. Kyle, M.D. Associate Prof. of Medicine
Director, Metabolic Laboratory
Rene Kovach, M.D. - Fellow in Medicine (beginning C2)
Gerald Rosenthal, Chemist (beginning C2)
Theodore Litovitz, Physicist (beginning C2)

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Georgetown University School of Medicine, Washington 7, D. C.
Georgetown University Hospital, Washington 7, D. C.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

This is the second year of a project designed to study protein catabolism in uremic subjects. The rate of accumulation of urea nitrogen, creatinine, uric acid and nitrogen balance studies have been done in extreme situations of catabolism and anabolism and in stabilized uremic subjects under treatment regimes designed to accentuate or minimize protein breakdown. An attempt is being made to obtain background data of normal values for nitrogen accumulation in these very complicated patients. In addition, there has been some basic development of our beta counting technique in the hopes that additional labels can be used in expanding the data obtained by this study. Several I-131 labelled human serum albumin degradation curves have been obtained simultaneously with the plotting of nitrogen accumulation.

SIGNATURE OF PRINCIPAL INVESTIGATOR: George E. Schreiner

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL:

Submitted for period beginning - June 1955

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-579	6/54 - 5/55	$12,720
579 C1	6/55 - 5/56	7,998
579 C2	6/56 - 5/57	8,511

PHS 166
REV. 10-52

Form Approved
Budget Bureau No. 92-R001.2

NOT FOR PUBLICATION OR PUBLICATION REFERENCE

NOTICE OF RESEARCH PROJECT

BIO-SCIENCES INFORMATION EXCHANGE
SMITHSONIAN INSTITUTION

PROJECT NO. (Do not use this space)
A-592 C3
Bio. (5)

SUPPORTING AGENCY: Public Health Service

TITLE OF PROJECT: "Metabolism and Composition of Calcified Tissues"

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

W. D. Armstrong, Prof. and Head, Physiological Chemistry Department
Leon Singer, Instructor
Mary Gonze, Mary L. Smersh, Helen Trainor, Technicians

NAME AND ADDRESS OF INSTITUTION:

University of Minnesota Medical School, Minneapolis, 14, Minnesota

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio-Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in the bio-sciences and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

(1) Study of uptake and elimination of radioisotopes of Ca, P, C and Na by skeleton and teeth in order to determine the "turnover" of these elements by calcified tissues.

(2) In vitro exchange of Ca, P, C and Na by bone on synthetic apatite traced with radioactive isotopes of these elements.

(3) Uptake and distribution of C^{14} in proteins and fats when C^{14} is fed as sucrose.

(4) Metabolism of glycine labeled with C^{14} and N^{15}.

(5) Uptake and elimination of fluorine by the skeleton of rats.

(6) Repletion of the skeleton with Ca and P when these elements are fed in various states of chemical combination.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL

INVESTIGATOR—DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-592	8/47 - 6/48	$ 8,623
592 C1	7/48 - 6/49	13,701
592 C2	7/49 - 6/50	14,311
592 C3	7/50 - 6/51	14,192

NOTICE OF RESEARCH PROJECT
Medical Sciences Information Exchange
Not for Publication
C O P Y

A-592
Project No. ~~BG-954~~(C5)
Biochem. (5)

Supporting Agency: Public Health Service

Title of Project: Metabolism and Composition of Calcified Tissues

Professional Personnel: Dr. W. D. Armstrong, Professor and Head, Dept. of Physiological Chemistry
Dr. Leon Singer, Assistant Professor, Dept. of Physiological Chemistry

Name of Institution: University of Minnesota, Minneapolis 14, Minnesota

Summary of Proposed Work:

This investigation is aimed at a study of the interrelations of skeletal composition and metabolism with those of other organs and tissues. Among the specific topics to be investigated are: (1) The exchange of calcium between bones and extra cellular fluids using radioactive calcium (Ca^{45}). In this study radioactive sodium (Na^{22}) is also used in order to estimate the volume of the extracellular space of the dogs used in the studies. (2) A study of the comparative turnover and elimination of Ca^{45} from the skeleton and its components. (3) A study of the factors which influence the resorption of bone. The quantity of bone resorbed under the experimental conditions is determined by the amount of calcium^{45} which, having previously been incorporated in the skeleton, is excreted in the urine. (4) Radioisotopes of calcium, sodium and carbon are to be used in a study of the factors which affect the penetration of ions and solutions into the enamel of teeth.

Grant No.	Period of Operation	Amt. App.
A592 ~~BG 354~~	8/47 - 6/48	$ 8,623
354 C1	7/48 - 6/49	13,701
354 C2	7/49 - 6/50	14,311
354 C3	7/50 - 6/51	14,192
354 C4	7/51 - 6/52	14,424
354 C5	7/52 - 6/53	14,493

NOTICE OF RESEARCH PROJECT
Bio Sciences Information Exchange
Not for Publication

C O P Y

Project No. A-592 (C6)
Biochem (5)

Supporting Agency: Public Health Service

Title of Project: Metabolism and Composition of Calcified Tissues

Professional Personnel: Dr. W. D. Armstrong, Professor and Head, Dept. of Physiological Chemistry
Dr. Leon Singer, Assistant Professor, Dept. of Physiological Chemistry

Name of Institution: University of Minnesota, Minneapolis 14, Minnesota

Summary of proposed work:

This investigation is aimed at a study of the interrelations of skeletal composition and metabolism with those of other organs and tissues. Among the specific topics to be investigated are: (1) The exchange of calcium between bones and extracellular fluids using radioactive calcium (Ca^{45}). In this study radioactive sodium (Na^{22}) is also used in order to estimate the volume of the extracellular space of the dogs used in the studies. (2) A study of the comparative turnover and elimination of Ca^{45} from the skeleton and its components. (3) A study of the factors which influence the resorption of bone. The quantity of bone resorbed under the experimental conditions is determined by the amount of calcium^{45} which, having previously been incorporated in the skeleton, is excreted in the urine. (4) Radioisotopes of calcium, sodium and carbon are to be used in a study of the factors which affect the penetration of ions and solutions into the enamel of teeth.

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
A-592	8/47 - 6/48	$8,623	A-592 C5	7/52 - 6/53	$14,493
592 C1	7/48 - 6/49	13,701	592 C6	7/53 - 6/54	14,496
592 C2	7/49 - 6/50	14,311	592 C7	7/54 - 6/55	13,483 *
592 C3	7/50 - 6/51	14,192	592 C8	7/55 - 6/56	13,717 *
592 C4	7/51 - 6/52	14,424	592 C9	7/56 - 6/57	13,967 *

* Commitment

Reports for the Bio Sciences Information Exchange.
Not for publication or publication references.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. A-255 (C4)
ENDO (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

PREVIOUS GRANT NO.

TITLE OF PROJECT

Corticosteroid Binding by Plasma and Tissue Components

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

William H Daughaday, M. D., Assistant Professor of Medicine, Department of Medicine, Washington University School of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Washington University, St. Louis 5, Missouri

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The objectives of this research program can be summarized under three headings:

A. Plasma transport of corticosteroids: Preliminary experiments have indicated that there may be differences in the binding of 17-OH corticosteroids which occurs in-vivo from that when studied in-vitro with hydrocortisone. A critical reevaluation of this problem will be undertaken. The results obtained using standard chemical technics will be checked using radiochemical methods with hydrocortisone-4-C^{14}. Data will be obtained concerning the binding of 17-OH corticosteroid glucuronides and the significance of this finding in terms of the mechanism of renal excretion will be considered.

B. Cellular permeability: The entrance of corticosteroids into cells will be measured using erythrocytes, leukocytes and ascites tumor cells. An attempt will be made to determine the factors which influence the entrance of corticosteroids into the cell in health and disease.

C. Association of corticosteroids with cellular constituents: The affinity of intracellular components for corticosteroids will be studied initially in dialyzed homogenates of various organs. Information concerning the distribution of corticosteroids within the cell will be sought by subjection of the homogenates of liver and other tissues to fractionation of the subcellular components with measurement of the relative affinities for corticosteroids.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, other) with which this project should be identified:

SCHOOL Medical

INVESTIGATOR — DO NOT USE THIS SPACE

PHS-166
REV. 8-61

Form Approved

Prepared for the Bio Sciences Information Exchange. Not for publication or publication reference.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-265(C3)
Surg (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Diagnosis of Potential Avascular Necrosis of the Head of the Femur.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. H. B. Boyd, Associate Professor of Orthopaedics, Campbell Clinic
Dr. R. A. Calandruccio, Orthopaedic Surgeon, Campbell Clinic
Dr. D. B. Zilversmit, Associate Professor of Physiology, University of Tennessee

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Campbell Clinic, 869 Madison Avenue, Memphis, Tennessee
University of Tennessee, 874 Union Avenue, Memphis, Tennessee

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

To the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The applicants propose to increase the number of patients with fresh fracture of the neck of femur in which the correlation between the radioactive phosphorus technique and the ultimate clinical diagnosis will be obtained. In some patients at the time of initial surgery prostheses will be inserted and the distribution of P^{32} in the removed heads will be studied and compared to the microscopic sections and roentgenological appearance of the bone. The blood supply to the head of the femur in experimental animals will be determined with Cr_{51}-labeled red cells and these data will be compared to the uptake of P^{32} in the femoral head.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Harold B. Boyd

Submitted for period beginning-January 1956

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified.

SCHOOL: Medical

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amount Approved
A-265	1/53 - 12/53	$4,428
265 C1	1/54 - 12/54	3,428
265 C2	1/55 - 12/55	3,428
265 C3	1/56 - 12/56	6,727
265 C4	1/57 - 12/57	6,501 *

PHS-166
REV. 5-54

* Commitment

Form Approved
Budget Bureau No. 42 R...

Not for publication or publication reference.

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-294(C)
M [illegible]. (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

THE TURNOVER RATE OF SERUM ALBUMIN AS MEASURED BY IODINE 131-TAGGED ALBUMIN IN THE NEPHROTIC CHILD BEFORE, DURING AND AFTER ACTH (ADRENOCORTICOTROPIC HORMONE) THERAPY.

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Dr. Benjamin Kramer-Principal Investigator
Dr. Leon Hellman- Biophysics Consultant

SUPPORT FROM THIS SOURCE TERMINATED 8/53

NAME AND ADDRESS OF APPLICANT INSTITUTION:

The Jewish Hospital of Brooklyn- 555 Prospect Place, Brooklyn 16, New York.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The initial studies were designed to explore the disappearance rates of iodine 131-labeled albumin from the plasma of nephrotic and normal children. Preliminary considerations of our data suggested that albumin is supplied to the circulation in greater quantities in nephrosis. Further studies along this line are in progress. In addition, studies on protein synthesis from labeled amino acids are presently under way in nephrosis. The experiments with labeled albumin will be extended to include studies with labeled gamma globulin as soon as preliminary testing of the suitability of currently available labeled human gamma globulin is completed.

The turnover of serum cholesterol with cholesterol-4-C^{14} as well as cholesterol synthesis from tritium (H^3) labeled acetate will be followed as a supplement to the protein studies. Preliminary data in an adult nephrotic patient with cholesterol-4-C^{14} indicates that very little radioactivity is excreted in the urine after the oral administration of the labeled cholesterol despite marked proteinuria. This finding is consistent with the hypothesis of the piling up of cholesterol in the plasma along with alpha 2 and beta globulin.

SIGNATURE OF PRINCIPAL INVESTIGATOR Dr. Benjamin Kramer

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL State Univ. of N. Y. College of Med.

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-294	9/53 - 8/54	$8,100
294 C1	9/54 - 8/55	7,992

SUPPORT FROM THIS SOURCE TERMINATED 8/55

PHS 166

Form Approved

Prepared for the Medical Sciences Information Exchange.
Not for publication or publication reference without consent of the principal investigator.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

(LEAVE BLANK)
A-358
M-I (1)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

Quantitative Studies of Human Non-precipitating Antibodies, Using Radioactive Isotope Techniques.

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

David W. Talmage, M.D., Assistant Professor, Department of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION

University of Chicago, 950 E. 59th Street, Chicago 37, Illinois

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The purpose of the proposed investigation is to develop with the aid of radioactive isotope techniques a method, or methods, of measuring non-precipitating antibodies to a wide variety of antigens. Methods now available are not applicable to the antigens responsible for most human allergic disorders. The method proposed involves the use of the cellulose protein antigen developed by Campbell and co-workers and the uptake of I^{131} labelled antibody reported by Butement. With this method an attempt will be made to measure the non-precipitating antibody in the sera of patients with allergic disorders and to determine the effect of various hyposensitization procedures on the concentration of this antibody. In addition, an effort will be made to determine whether non-precipitating antibodies are present and significant in some of the collagen diseases in which it is considered possible that allergic reactions play a part.

SIGNATURE OF PRINCIPAL INVESTIGATOR _____

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

Grant No	Period of Operation	Amt. Approved
A-358	5/53 - 4/54	$10,970
358 C1	5/54 - 4/55	10,970 *

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* Commitment

Not for publication or publication reference without consent of the principal investigator.

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-358(C)

M & I (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Quantitative Studies of Human Non-Precipitating Antibodies, Using Radioactive Isotope Techniques

David H. Talmage, M.D., Assistant Professor, Department of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION

University of Chicago, 950 E. 59th St., Chicago 37, Illinois

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The purpose of the proposed investigation is to develop with the aid of radioactive isotope techniques a method, or methods, of measuring non-precipitating antibodies to a wide variety of antigens. Methods now available are not applicable to the antigens responsible for most human allergic disorders. The method proposed involves the use of the cellulose protein antigen developed by Campbell and co-workers and the uptake of I^{131} labelled antibody reported by Butement. With this method an attempt will be made to measure the non-precipitating antibody in the sera of patients with allergic disorders and to determine the effect of various hyposensitization procedures on the concentration of this antibody. In addition, an effort will be made to determine whether non-precipitating antibodies are present and significant in some of the collagen diseases in which it is considered possible that allergic reactions play a part.

SIGNATURE OF PRINCIPAL INVESTIGATOR

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

Grant No.	Period of Operation	Amt. Appr.
A-358	5/53 - 4/54	$10,970
358 C1	5/54 - 4/55	10,970

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Information Exchange.
Not for publication or publication reference without consent of the principal investigator.

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-376(C2)
M - M (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT

Studies of Intermediary Metabolism in Vivo

GIVE NAMES, DEPARTMENTS, AND OFFICIAL TITLES OF PRINCIPAL INVESTIGATOR AND ALL OTHER PROFESSIONAL PERSONNEL ENGAGED IN THIS PROJECT.

Max Miller, M.D., Associate Professor of Medicine, Department of Medicine,

James W. Craig, M.D., Instructor in Medicine

Reginald A. Shipley, Director Isotope Research, Crile VA Hospital, Associate Clinical Professor of Medicine

Hiram Woodward, Jr., B.S., Biochemist

NAME AND ADDRESS OF APPLICANT INSTITUTION

Western Reserve University, School of Medicine, 2109 Adelbert Road, Cleveland 6, Ohio.

SUMMARY OF PROPOSED WORK *(300 words or less — omit confidential data)*

In the exchange of information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Using pyruvic, citric, and malic acid determinations as indicators of reactions of intermediary metabolism in vivo, studies of the interconversion of various substances in dog and man are contemplated. Substances such as glucose, fructose, pyruvic acid, amino acids (alanine, glycine, glutamic acid, etc.) acetate and members of the tricarboxylic acid cycle (succinate, fumarate, malate, etc.) will be injected intravenously and blood will be analyzed before and at intervals thereafter for the determination of pyruvic, citric and malic acids. Where methods are available for the determination of the substance injected, blood and urine samples will be collected to determine the rate of disappearance from the blood stream and the overall balance. By using the catheterization technique of Cournand samples of blood will be obtained from liver, kidney and skeletal muscle to give information concerning the contribution of these organs to the overall metabolic reactions. A detailed study of the intermediary metabolism of fructose is now in progress, including the comparison of the metabolism of C^{14} labelled glucose and fructose in normal and diabetic patients.

SIGNATURE OF PRINCIPAL INVESTIGATOR

IDENTIFY ANY PROFESSIONAL SCHOOL (MEDICAL, DENTAL, PUBLIC HEALTH, GRADUATE, OR OTHER) WITH WHICH THIS PROJECT SHOULD BE IDENTIFIED.

IN YEAR

Grant No.	Period of Operation	Amt. App.
A 376	9/51 - 8/52	$8,100
376 C1	9/52 - 8/53	8,640
376 C2	9/53 - 8/54	9,638
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376 C3	9/54 - 8/55	~~10,100~~ * 100,96
376 C4	9/55 - 8/56	10,100 *

* Commitment

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A - 425(C3)
Bio. (2)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

BIOCHEMICAL STUDIES ON RARE CARBOHYDRATES

PRELIMINARY

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Principal Investigator: Paul Kahn, Ph.D., Assistant Professor of Biological Chemistry

Research Assistant: (part-time) Bernice L. Dauchowski, Department of Biological Chemistry

Senior Technologist: Virginia Aguilar, Department of Biological Chemistry

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Illinois College of Medicine
Chicago 12, Illinois

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

This investigation will entail the synthesis of rare carbohydrates labeled with carbon-14, and, in larger amounts, unlabeled. These carbohydrates include gulose, idose, talose, allose and altrose. It is proposed that they be used in an investigation of their possible conversion to glucose. Degradation of the glucose to locate the isotope will permit deductions as to the pathway of conversion. Enzymes and co-enzymes involved in the conversion will be studied.

It is also proposed that these carbohydrates be used in a study of absorption rate from the intestine.

Various phosphate esters, as well as the free carbohydrates, will be prepared in order to study possible anti-metabolic actions.

The conversion of galactose into fucose, and the incorporation of these carbohydrates into glycoproteins will be investigated.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Paul Kahn

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL: Univ. of Ill. College of Medicine

INVESTIGATOR — DO NOT USE THIS SPACE

PRELIMINARY

PHS-166
DEV 6-61

Form Approved
Budget Bureau No. 92-R001.2

Prepared for the Bio Sciences Information Exchange.
Not for publication or publication reference.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-435(C3)

H & M (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Some Metabolic Studies on Diabetic Retinopathy

PRELIMINARY

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Bacon F. Chow, Ph.D.
Associate Professor
Department of Biochemistry

NAME AND ADDRESS OF APPLICANT INSTITUTION:

The Johns Hopkins University, School of Hygiene and Public Health,
615 North Wolfe Street, Baltimore 5, Maryland

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Bio Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The object of our research is to ascertain the physiologic role of vitamin B12, so essential for the metabolism of carbohydrates, in diabetes with or without retinopathy. It was found that diabetics with retinopathy retained less of the injected vitamin B12 than those without retinal lesion. Furthermore, the latter group absorbed less of the orally administered vitamin B12 labelled with Co^{60}, as measured by the urinary excretion test or the fecal excretion test. In an effort to study the cause of the poor absorption, it was found pyridoxine deficiency or thyroidectomy will impair absorption.

The Vitamin B12 serum level of diabetics with retinopathy was higher than those without retinopathy or the non-diabetics. The elevation of B12 content could be induced in rats by the administration of cortisone or carbon tetrachloride.

SIGNATURE OF PRINCIPAL INVESTIGATOR

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL of Hygiene and Public Health

INVESTIGATOR — DO NOT USE THIS SPACE

PHS-166

Form Approved
Budget Bureau No. 68-R012.2

Prepared by the Medical Sciences Information Exchange.
Not for publication or publication reference.

FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

NOTICE OF RESEARCH PROJECT

A-446(C)
Dup (5)

SUBMITTED TO: Public Health Service, National Institutes of Health, Div. of Research Grants, Bethesda 14, Md.

TITLE OF PROJECT:

Study of Parameters of the Thyroid Gland

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

G. L. Brownell, Ph.D., Assoc. in Physics
Physics Research Laboratory, Department of Medicine
J. B. Stanbury, M.D., Assoc. in Medicine
Thyroid Laboratory, Department of Medicine
Stephen Crane, M.D., Research Assoc.
Department of Medicine

NAME AND ADDRESS OF APPLICANT INSTITUTION:

Massachusetts General Hospital
Boston 14, Massachusetts

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data.)

In the Medical Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

The project deals with the quantitative determination of all parameters of function of the thyroid gland by means of isotope and chemical measurement and suitable means of analysis. The perameters dealing with the thyroid are the thyroid and renal iodide clearance rate, thyroid iodide accumulation rate and hormone release rate, hormonal iodine utilization rate, organic iodine excretion rate and the various spaces for iodine within the body. These are to be determined by frequent measurements of blood, urine and thyroid content of labeled iodine over a three-week period in patients with various levels of thyroid activity. In addition, chemical analyses of iodine will be made. The data will be analyzed mathematically by means of an analogue computer designed specifically for the analyses of biological data.

In addition to the iodine studies, parallel studies on calcium metabolism in patients with various levels of thyroid activity have been commenced. The object of this study is to determine the various compartments for calcium within the body and the rate constants between them. This is being done by measurements of blood level and excretion of radiocalcium and chemical calcium observations. The problems of analysis in this study are very similar to those of the iodine study and are being approached in the same manner.

SIGNATURE OF PRINCIPAL INVESTIGATOR: Gordon L. Brownell

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL: Harvard Medical School

INVESTIGATOR — DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.
A-446	9/53 - 8/54	$15,840
446 C1	9/54 - 8/55	15,880
446 C2	9/55 - 8/56	16,960 *

* Commitment

PHS-166
REV. 10-52

Form Approved
Budget Bureau No. 52-R001.2

D - 17

NOTICE OF RESEARCH PROJECT

Contracting Agency: U.S.P.H.S. Division of Research Grants and Fellowships.

Proposal Number: _____ Date Received: 4/18/47

Project Number: ~~RG 1003~~ B 19 Date Approved: 6/12/48

Descriptive Title of Project:
"Efficacy of Nasopharyngeal Irradiation in the Prevention of Deafness-Cooperative Field Study in the Prevention of deafness in the Johns Hopkins School of Hygiene and Public Health and the Johns Hopkins School of Medicine".

Principal Investigator: Dr. Samuel James Crowe, Adjunet Prof. of Laryngology & Otology.

Name of Institution: Johns Hopkins University School of Hygiene and Public Health,
Baltimore, Maryland.

Estimated Duration: Five years

.14

Abstract by Principal Investigator when contract has been approved.

The War Department reports that of the 1,312,000 enlisted men separated from the Army during the perido 1942 - 1945, a little more than 90% were discharged for disability due to disease. A total of 58,715 of these men were declared unfit for duty because of eye, ear, nose and throat disease.

If we are not to have a repetition of these figures some steps should be taken to prevent these disabilities in the next generation. We are sure disability in later life, due to certain types of impaired hearing and to chronic sinus infection, can be prevented if children in primary schools are carefully examined once or twice each year and receive treatment that will not only cure the acute process, but remove as far as possible the underlying cause, and thus prevent recurring infections.

We are asking for funds to finance a 5 year field study of a group of 5000 school children between the ages of 8 and 13 years. The object of the investigation is to gather statistical data, with adequate controls, to determine how effective radium treatments of the nasopharynx of children carried out at their schools will be in preventing suppurating ears, certain types of impaired hearing, and chronic sinusitis.

This information will be supplied to Federal Agencies to avoid unknowing duplication of this work.

SUPPORT FROM THIS SOURCE TERMINATED //

NOTICE OF RESEARCH PROJECT

PROJECT NO. (Do not use this space)
A-252
N & N (1)

CONTRACTING AGENCY: FEDERAL SECURITY AGENCY, PUBLIC HEALTH SERVICE

Support from this source terminated 11/53

TITLE OF REQUEST

The Metabolism of Uric Acid in Normal and Pre-Eclamptic Pregnant Women Studied with the Aid of Isotopic Uric Acid

Give names, departments, and official titles of PRINCIPAL INVESTIGATOR(S) and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

Seitchik, Joseph MD; Assoc. Prof. Obs. and Gyn.
Wase, Arthur W. PhD; Research Associate
Boyd, M. John PhD; Professor and Head of Division Of Biol. Chem.

NAME AND ADDRESS OF INSTITUTION:

Hahnemann Medical College, 235 N. 15th. St.; Phila., 2, Pa.

SUMMARY OF PROPOSED WORK — (200 words or less — Omit Confidential data)

In the Program of Exchange of Information summaries of work in progress are exchanged with government and private agencies supporting research in medical and related fields and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Hyperuricemia is a common laboratory finding in severe cases of acute toxemia of pregnancy. While the abnormal renal tubular reabsorption of uric acid occurs early in the disease, the hyperuricemia occurs later in the natural history of this pathology.

It is the purpose of the proposed study to obtain information concerning the metabolism of uric acid in patients with pre-eclamptic toxemia using N-15 labelled uric acid. Information would be obtained concerning the size of the miscible pool and the turnover rate of uric acid in normal pregnant women and patients with acute toxemia during pregnancy and in the puerperium.

PHS-166-1 (RG) REV. 6-49
FORM APPROVED
BUDGET BUREAU NO. 68-R403

SIGNATURE OF PRINCIPAL INVESTIGATOR Joseph Seitchik

REMOVE SMUDGE SHEET BEFORE TYPING

Grant No.	Period of Operation	Amt. Appr.
A-252	12/52 - 11/53	$3,937

Support from this source terminated 11/53