

NOT FOR PUBLICATION OR PUBLICATION REFERENCE

BIO-SCIENCES INFORMATION EXCHANGE  
SMITHSONIAN INSTITUTION

PROJECT NO. (Do not use this space)

GF 968

SUPPORTING AGENCY: OFFICE OF THE SURGEON GENERAL, DEPARTMENT OF THE ARMY

TITLE OF PROJECT: The Relationship of Biochemical and Enzymic Abnormalities of Cells to Radiation Susceptibility and to Their Injury by Other Agents (Including Observations on the Susceptibility of Primaquine-Sensitive Cells to Radiation)

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

Alf S. Alving, M.D., Professor of Medicine

ARM1.941209.163

Paul E. Carson, M.D., Research Associate (Assistant Professor)

NAME AND ADDRESS OF INSTITUTION:

The University of Chicago, Chicago, Illinois (37)

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.

Primaquine-type hemolysis occurs in individuals whose erythrocytes are deficient in both glutathione and glucose 6 phosphate dehydrogenase. The proposed work will be an investigation of the relative effects of radiation on these and other constituents of both normal and primaquine-sensitive erythrocytes under various experimental conditions. These effects will be correlated with those induced by other agents such as various drugs, etc. It is further planned to begin observations on animals whose erythrocytes have differing glutathione contents.

RE-SUBMITTED 6/59

Submitted June 1958.

SIGNATURE OF PRINCIPAL INVESTIGATOR

*Alf S. Alving*

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

University of Chicago School of Medicine

SCHOOL

INVESTIGATOR—DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amount Approved
GF 968	7/58 - 6/59	\$ 28,152
C1	7/59 - 6/60	28,152
C2	7/60 - 6/61	54,449

Washington National Record Center  
Office of the Army Surgeon General  
Record Group 112

Accession #: 67A-4813

Box #: 43

File: Dr. Paul E. Carson MD-968  
University of Chicago  
Reports & Manuscripts

GF 20

NOTICE OF RESEARCH PROMPT  
U. S. Scientific Information Exchange  
Not for Publication

Supporting Agency: Dept. of the Army,  
Office of the Surgeon General

Project No. GF-20  
Support from this source terminated  
7/54

Title of Project: Primaquine in the therapy of acute and chronic malaria.

Professional Personnel: Alf. S. Alving

Name of Institution: University of Chicago

Summary of Proposed Work:

<u>Grant No.</u>	<u>Period of Operation</u>	<u>Amt. Approved</u>
GF-20	1/50 - 12/50	\$ 60,626
20 C1	1/51 - 12/51	60,626
20 C2	1/52 - 12/52	60,626
20 C3	1/53 - 7/53	35,365
20 C4	8/53 - 7/54	No add. funds approved

Support from this source terminated  
7/54

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**HOUSE OF RESEARCH PROJECTS**  
**BIO-SCIENCES INFORMATION EXCHANGE**  
 SMITHSONIAN INSTITUTION

NOT FOR PUBLICATION OR  
 PUBLICATION REFERENCE

PROJECT NO. (Do not use this space)  
 OF 566 cl

Dept. of the Army, U. S. Army Medical  
 Research and Development Command

SUPPORTING AGENCY:

TITLE OF PROJECT: Investigations on chemotherapy of malaria and related subjects, and on a febrile disease transmitted by blood transfusions

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

Alf S. Alving, M.D., Professor of Medicine  
 George J. Brewer, M.D., Research Assistant in Medicine - beginning C5  
 Capt. Alvin Tarlov, M.C., U.S.A. - beginning C5

NAME AND ADDRESS OF INSTITUTION: University of Chicago  
 Medical School  
 Chicago, Illinois

OF PROPOSED WORK — (200 words or less—Omit Confidential data.)  
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The proposed investigations concern expansion of basic studies and practical aspects of antimalarial drugs. Particular attention will be paid to the suppressive antimalarial drug chloroquine and the curative antimalarial agent primaquine. The effect of these drugs on Malayan strains of malaria will be investigated. Malayan malaria is of special interest because they have shown resistance to certain antimalarial agents such as paludrine and daraprim. This is part of an investigation to document the effectiveness of antimalarial agents in various parts of the world.

The mechanism of the development of hemolytic anemia in dark-skinned races, particularly those who may be administered primaquine, is a major problem. Ten percent of Negroes, who take twice the therapeutic dose used in treating Korean veterans, develop a severe anemia. Attempts will be made to discover basic mechanisms involved and possible means of avoiding this anemia.

The activity of other antimalarial agents will also be studied in the Chesson and Malayan strains of Vivax malaria.

The effectiveness of weekly administration of a combined weekly dose of primaquine and chloroquine in the prophylactic cure and suppressive cure of vivax malaria is being intensively studied. Acute hemolytic anemia can be prevented by weekly administration of these drugs.

The biochemical and enzymatic abnormalities of "primaquine sensitive" erythrocytes is under investigation. Primaquine sensitivity is a genetically produced trait, which is widely distributed and has been shown to occur because of a partially dominant sex-linked mutant gene in many racial and ethnic groups. Clarification of inheritance of this trait in women is under investigation in an attempt to unveil somatic factors which modify the genetic expression or penetrance in females.

SIGNATURE OF PRINCIPAL INVESTIGATOR Alf S. Alving  
 Identify the Professional School (medical, dental, public health, graduate).

Resubmitted March 1960

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
CF 566	7/54 - 6/55	\$36,992	GF 566 clS	11/58 - 10/59	\$ 2,700
566 C1	7/55 - 6/56	39,290	566 C5	11/59 - 10/60	60,000
566 C2	7/56 - 6/57	37,990	566 C5S1	11/59 - 10/60	3,000
566 C3	7/57 - 10/58	52,356	566 C5S2	11/59 - 10/60	12,000
566 C3S1	7/57 - 10/58	9,165	566 C5S3	11/59 - 10/60	97,000
566 C3S2	7/57 - 10/58	14,993	566 C6	11/60 - 10/61	111,583
566 cl	11/58 - 10/59	59,983			

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 University of Chicago  
 Reports & Manuscripts

QY 2352

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

PROJECT NO. (Do not use this space)  
 012760(GA)

PREPARED FOR THE SCIENTIFIC INFORMATION EXCHANGE  
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NOTICE OF RESEARCH PROJECT

FORM 100 (5)

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

TITLE OF PROJECT: Chemotherapy for the Leukemias Support from this source terminated 12/57

See formal appointment and official letter of PRINCIPAL INVESTIGATOR and PI OTHER PROFESSIONAL PERSONNEL engaged on the project.

L. T. Coggeshall, M.D., Dean, Division of Biological Sciences, principal investigator.

Project leaders: (1) Dr. David W. Talmage, Asst. Prof. of Medicine  
 (2) Dr. Kenneth P. DuBois, Assoc. Prof. of Pharmacology  
 (3) Dr. John D. Arnold, Asst. Prof. of Medicine  
 (4) Dr. Mila Pierce, Assoc. Professor of Pediatrics  
 Dr. Alf S. Alving - original & CI

NAME AND ADDRESS OF APPLICANT INSTITUTION: University of Chicago, 950 East 59th Street, Chicago, Illinois

SUMMARY OF PROPOSED WORK - (25 words or less - Give Confidential data.) In the Scientific Information Exchange summaries of work in progress are exchanged with government and public agencies supporting research in medical and related fields and are forwarded to investigators who request such information. This summary is to be used for these purposes.

- Summaries by projects:
- (1) A study of the metabolic changes that occur in a sensitized cell as a result of contact with the appropriate antigen or antibody. The method employs C<sup>14</sup> acetate as the metabolic tracer, and the function measured is the rate of production of C<sup>14</sup><sub>02</sub>.
  - (2) A systematic study of the effect of known chemotherapeutic agents (of interest in the treatment of leukemia) on various enzyme systems as measured by conventional technics. These studies parallel those developed for studying the effect of ionizing radiations, and the influence of "radiation-protective" substances.
  - (3) The development of an in-vivo model for studying individual cells under conditions comparable to those that exist outside the capillary bed.
  - (4) A systematic examination of the virus-host-leukemia relationship using transmissible leukemia in mice.

Submitted for period ending April 1956

SIGNATURE OF PRINCIPAL INVESTIGATOR  
*L. T. Coggeshall*  
 Identify the Professional School (medical, dental, public health, graduate or other) with which the project should be identified.  
 UNIVERSITY OF CHICAGO

Grant No.	Period of Operation	Ant. Appr.
04910	6/54 - 3/55	\$75,000
05001	4/55 - 3/56	75,000
05002	4/55 - 3/57	75,000

Support from this source terminated 12/57

PHS-16 107-106

Form Approved Budget Form No. 10-5000-1

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 University of Chicago  
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Prepared by  
Office of Exchange of Information, IHS  
Not for Publication

NOTICE OF RESEARCH PROJECT

Support from this  
source terminated 6/52

Contracting Agency: P.H.S., Division of Research Grants and Fellowships

Proposal Number: \_\_\_\_\_ Date Received: 3/30/49

Project Number: E-20 Date Approved: \_\_\_\_\_

Descriptive Title of Project: "Studies on the mechanism of drug action and  
clinical testing of potential antimalarial  
drugs"

Principal Investigator: Dr. Alf S. Alving, Professor of Medicine  
Department of Medicine

Name of Institution: University of Chicago

SUPPORT FROM THIS SOURCE TERMINATED 6/52

Abstract by Principal Investigator when contract has been approved.

1. Completion of observations on patients who have undergone therapeutic trials prior to 1 June 1949.
2. Completion of study of the toxicity of pentaprime (SN-13,272) at high dosages on mechanism of and prevention of hemolytic anemia, and drug synergism.
3. Preparation of scientific reports of investigations carried out during the past three years.

Grant No.	Period of Operation	Amount Approved
E 20	7/46 - 6/47	\$ 55,200
20 C1	7/47 - 6/48	48,585
20 C1S1	3/48 - 6/48	6,651
20 C2	7/48 - 6/49	15,000
20 C2S1	12/48 - 6/49	10,000
20 C3	7/49 - 6/52	

Support from this source terminated 6/52

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University of Chicago  
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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)

H-315(C9) & C10

CALDIO (5)

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

TITLE OF PROJECT:

Factors Affecting Electrolyte and Water Excretion

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

Theodore M. Fullman, M.D., Principal Investigator, Assoc. Professor of Medicine, Department of Medicine

Ardis H. Lavender, M.D., Instructor in Medicine, Department of Medicine

William H. Soybel, M.D., Ass't Resident in Medicine, Department of Medicine

Alf S. Alving, M.D., Professor of Medicine - through C6

NAME AND ADDRESS OF APPLICANT INSTITUTION:

University of Chicago

950 E. 59th Street  
Chicago 37, Illinois

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

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Some of the influences modifying the excretion of water and electrolytes in dog and man are being studied. In man, these include the effects of antecedent intakes of sodium and potassium on the excretory responses to various stimuli. In the dog, studies are being made on unilateral renal arterial infusions and their influence on the differential excretory patterns. Diuretics, hormonal preparations, and other pharmacologic agents are under investigation. Observations are also being made on the effects of variation in composition of glomerular filtrate on excretory function. Studies on renal hemodynamics and ureteral pressures and the relation of these to electrolyte and water excretion are also being carried out. In addition, plans are being made for applying these techniques to the study of urate, phosphate, and calcium excretion.

Re Submitted for period  
beginning - October 1959

SIGNATURE OF  
PRINCIPAL  
INVESTIGATOR

*Theodore M. Fullman*

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

SCHOOL of Medicine, University of Chicago

INVESTIGATOR - DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. Appr.	Grant No.	Period of Operation	Amt. Appr.
H 315	9/16/49 - 9/15/50	\$ 7,830	H 315 C7	10/56 - 9/57	\$19,693
315 C1	9/16/50 - 9/15/51	9,525	315 C8	10/57 - 9/58	19,694
315 C2	9/16/51 - 9/15/52	7,830	315 C9	10/58 - 9/59	19,699
315 C3	9/16/52 - 9/53	8,359	315 C10	10/59 - 9/60	19,699
315 C4	10/53 - 9/54	8,359	315 C11	10/60 - 9/61	19,699 *
315 C5	10/54 - 9/55	8,359	315 C12	10/61 - 9/62	19,699 *
315 C6	10/55 - 9/56	19,608	315 C13	10/62 - 9/63	19,699 *

\* Commitment

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Department of  
**HEALTH, EDUCATION, AND WELFARE**  
 PUBLIC HEALTH SERVICE  
 NATIONAL INSTITUTES OF HEALTH

PROJECT NO. (Do not use this space)

H-3690 (02)

**NOTICE OF RESEARCH PROJECT**

PATI (5)

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

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

TITLE OF PROJECT:

**Electron Microscope for Clinical Research**

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

**Drs. Lowell T. Coggeshall, Dean, Biological Science Division; Robert W. Wisaler, Professor, Dept. of Pathology; John D. Arnold, Associate Professor, Dept. of Medicine; Dr. Benjamin H. Spargo, Assistant Professor of Pathology; Dr. Alf S. Alving, Professor, Dept. of Medicine; Dr. Charles P. McCartney, Associate Professor of Obstetrics and Gynecology; Dr. Joseph Evans, Professor of Surgery.**

NAME AND ADDRESS OF APPLICANT INSTITUTION:

**THE UNIVERSITY OF CHICAGO, 950 E. 59th Street, Chicago 37, Illinois**

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

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Projects with emphasis on the clinical implications of ultrastructural changes now in progress include studies of the kidney, blood vessels, pituitary, central nervous system tumors and the skin. The renal problems include the nature of the renal glomerular lesions of the connective tissue disorders, the prediabetic state, and the toxemias of pregnancy. Various other changes associated with the nephrotic syndrome are also being investigated using biopsies in a clinical series and experimental situations. The tubular and interstitial changes of acute renal failure are being followed in conjunction with the use of the artificial kidney. Other morphologic renal changes in experimental animals related to the medullary concentrating mechanism have been reported and will be extended. Clinical and experimental lesions resulting in vesicle formation as well as other dermatologic problems will be expanded. The study of surgically removed pituitaries is combined with an extensive metabolic workup of each patient. Preliminary studies of the earliest lesions of atherosclerosis in the Cebus monkey are in progress and cellular changes associated with antibody formation in the rat spleen are being evaluated. The acute cellular changes in transplantable tumors, pancreas and liver of rats receiving amino acid antagonists are being studied.

SIGNATURE OF

PRINCIPAL INVESTIGATOR **Lowell T. Coggeshall, M.D., Dean**  
 Identify the (Professional School, medical, dental, public health, graduate, or other) with which this project should be identified  
**Division of Biological Sciences**

SCHOOL **University of Chicago Medical School**

Submitted for period beginning - May 1960

INVESTIGATOR - DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. in pr.
H 3690	5/50 - 1/59	25,868
3690 01	5/59 - 1/60	15,755
3690 02	5/60 - 1/61	17,135

PMS-166  
 REV. 3-56

Form Approved  
 Budget Bureau No. 92-R001.2

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**University of Chicago**  
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