NAVY DEPARTMENT
WASHINGTON, D. C.

OFFICIAL BUSINESS

WASHINGTON, D.C.
AUG 1
8-PM
1952

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(GPO)

Dr. Leo Szilard
Professor of Biophysics
Institute of Radiobiology and Biophysics
University of Chicago
Chicago 37, Illinois

OFFICE OF NAVAL RESEARCH
NAVY DEPARTMENT
WASHINGTON, D. C.

ONR:441:GJS
NR 119-221

1 August 1952

SIR:

Receipt of your communication dated 30 July 1952

in re receipt of semiannual progress report.
is acknowledged.

~~Reply thereto will be made as soon as possible.~~

NAVEXOS–1957

16—15338-1 GPO

Gertrude J. Stephens

(Mrs.) Gertrude J. Stephens
Secretary, Physiology Branch
Code 441

DEPARTMENT OF THE NAVY
OFFICE OF NAVAL RESEARCH
WASHINGTON 25, D. C.

IN REPLY REFER TO
ONR:441:OBP
NR 119-221
Ser

24548
SEP 29 1952

Dr. Leo Szilard
University of Chicago
Institute of Radiobiology and Biophysics
Chicago, Illinois

Dear Dr. Szilard:

We are pleased to inform you that your request for renewal of your research contract with the Office of Naval Research on "A Biophysical Approach to the Problems of Bacterial Growth and Bacterial Genetics" under Contract N6ori-20 T.O.38 has been approved and forwarded to the Contract Division for negotiation.

Since contractual negotiations are the function of the Contract Division, this notification of approval does not include authorization for contractual liabilities under the proposed contract. The Contract Division of this Office will communicate with your institution in the near future regarding negotiation of the proposed extension.

Sincerely yours,

F. H. QUIMBY
Head, Physiology Branch
By direction of
Chief of Naval Research

Copy to:
ONR - Chicago

Navy contract.

THE UNIVERSITY OF CHICAGO

February 17, 1953

DATE

Mr. W. B. Harrell

TO

Business Manager, Special Projects

DEPARTMENT

C. Earle Short

FROM

Research Institutes

DEPARTMENT

IN RE: Inventory lists on contract N6ori-02038, NR119,221

The inventory lists of all Government property that was acquired by purchase, development, construction, transfer or otherwise on the above mentioned contract are as follows:

(a) Plant equipment--equipment of a capital nature--$100 or over — none

(b) Minor equipment--equipment of a capital nature--under $100 — none

(c) Material and Supplies — none

(d) Special Tooling — none

file Navy contract.

February 20, 1953

A B S T R A C T

A study has been made of mutation rates in bacteria utilising a device we developed, called the Chemostat. This device maintains a stationary population of ~~growing~~ bacteria growing at a fixed rate and it permits us to observe the rate at which that mutation occurs in such a growing population. For a strain of E. coli sensitive to the bacterial virus T5 we find that the rate of mutations to resistance to this virus is greatly increased in the presence of any one of a number of purine derivatives. We further find that we can antagonize the mutagenic effect of most of these purines with certain purine ribosides. These purine ribosides also reduce the rate at which mutations occur spontaneously.

DEPARTMENT OF THE NAVY
OFFICE OF NAVAL RESEARCH
WASHINGTON 25, D. C.

IN REPLY REFER TO
ONR:441:FHQ:op
NR 119-221
Ser

483

Dr. Leo Szilard
University of Chicago
Institute of Radiobiology and Biophysics
Chicago, Illinois

JAN 8 1953

Dear Dr. Szilard:

Research in the Biological and Psychological Sciences is supported by a number of government and private agencies. In order to integrate information and avoid duplication of effort, it is intended to furnish those agencies, through the Medical Sciences Information Exchange, brief abstracts of the Biological and Psychological Sciences Research projects supported by this Office. Although sufficient information was included in your research proposal, it is believed that you are best qualified to prepare an abstract of your research program.

Will you be kind enough to prepare such an abstract within the space provided upon the enclosed form? Copies of this abstract will be made by this Office and forwarded to all interested agencies in the Medical Sciences Information Exchange.

Sincerely yours,

F. H. QUIMBY
Head, Physiology Branch
By direction of
Chief of Naval Research

Encl:
(1) Abstract

Copy to:
ONR/Chicago

February 20, 1953

Dr. F. H. Quimby
Head, Physiology Branch
By direction of
Chief of Naval Research
Department of the Navy
Washington 25, D. C.

Your Ref.: ONR:441:FHQ:op
NR 119-221
Ser

Dear Dr. Quimby,

In reply to your letter of January 8, I am sending you herewith the abstract which you requested.

Sincerely yours,

Enclosure

Leo Szilard

SL/llt

NOTICE OF RESEARCH PROJECT
MEDICAL SCIENCES INFORMATION EXCHANGE

National Academy of Sciences - National Research Council

Title of Project: Research on a Biophysical Approach to the Problem of Bacterial Growth and Bacterial Genetics.

Principal Investigator: Leo Szilard, Professor of Biophysics
Aaron Novick, Ass't. Prof.

Institute of Radiobiology and Biophysics, University of Chicago, Chicago, Ill.

A study has been made of mutation rates in bacteria utilising a device we developed, called the Chemostat. This device maintains a stationary population of bacteria growing at a fixed rate and it permits us to observe the rate at which that mutation occurs in such a growing population. For a strain of E coli sensitive to the bacterial virus T5 we find that the rate of mutation to resistance to this virus is greatly increased in the presence of any one of a number of purine derivatives. We further find that we can antagonize the mutagenic effect of most of these purines with certain purine ribosides. These purine ribosides also reduce the rate at which mutations occur spontaneously.

signed: Leo Szilard
University of Chicago
Institute of Radiobiology
and Biophysics

DEPARTMENT OF THE NAVY
OFFICE OF NAVAL RESEARCH
WASHINGTON 25, D. C.

IN REPLY REFER TO
ONR:441:FHQ:op
NR 119-221
Ser

493

JAN 8 1953

Dr. Leo Szilard
University of Chicago
Institute of Radiobiology and Biophysics
Chicago, Illinois

Dear Dr. Szilard:

The Physiology Branch of the Office of Naval Research is again submitting its requirements for the preparation and distribution of reports, due to the fact that our records indicate that we may have overlooked your project when the report program was originally revised.

The mechanics of fulfilling the report requirements of the contract as given here constitute our best attempt to adequately meet the demands made of us in the administration of the Office of Naval Research program without imposing undue hardship on the contractors. We feel that this policy which essentially calls for semiannual progress reports, simplifies the problem of reports for the investigators on Office of Naval Research contracts. It is in the interest of the investigators to comply with this formula of submitting reports, since the continued support of his research must for the most part be predicated upon the examination and evaluation of written reports by the various advisory committees and boards of the Department of Defense.

The next semiannual progress report as defined in the attached schedule is for the period from 1 January to 30 June 1953 and is due in this Office by 31 July 1953. Your cooperation in submitting this report, as well as additional reports and material as outlined, will be greatly appreciated.

Sincerely yours,

F. H. Quimby

F. H. QUIMBY
Head, Physiology Branch
By direction of
Chief of Naval Research

Encl:
(1) Report Schedule

Copy to:
ONR/Chicago

NAVY DEPARTMENT
WASHINGTON, D. C.

OFFICIAL BUSINESS

WASHINGTON, D.C.
MAR 3
5-PM
1953

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
Remember - (GPO) you can
PREVENT
FOREST FIRES

Dr. Leo Szilard
University of Chicago
Inst. of Radiobiology and Biophysics
Chicago 37, Illinois

OFFICE OF NAVAL RESEARCH
NAVY DEPARTMENT
WASHINGTON, D. C.

ONR:441:GJS
NR 119-221

3 March 1953

SIR:

Receipt of your communication dated 20 February 1953

in re receipt of semiannual progress report.
is acknowledged.

~~Reply thereto will be made as soon as possible.~~

NAVEXOS-1957

16-15338-1 GPO

(Mrs.) Gertrude J. Stephens
Secretary, Physiology Branch
Code 441

REPORT SCHEDULE
PHYSIOLOGY BRANCH
OFFICE OF NAVAL RESEARCH

TYPE OF REPORT		DATE WHEN DUE	NUMBER OF COPIES AND ADDRESSEES
1. SEMIANNUAL PROGRESS	Progress of research from January 1 to June 30 Progress of research from July 1 to December 31 These reports shall include: 1. General and specific objectives of the problem. 2. Progress: method, results, conclusions. (If this report is lengthy and contains figures and tables, an abstract or summary of the report should be included.) 3. Bibliography of all papers published and manuscripts submitted for publication in connection with the project within the indicated period. 4. Other information desired: a. Change in direction or emphasis and project title b. Any personnel changes c. Number of graduate students on contracts d. All research support received or withdrawn by other sources e. Difficulties encountered	July 31 January 31	4 copies to: Chief of Naval Research Attn: Physiology Branch (Code 441) Department of the Navy Washington 25, D. C. 1 copy to: ONR Area Branch Office
2. TECHNICAL REPORTS a. MANUSCRIPTS	Pre-publication abstracts and manuscripts (Manuscripts of papers submitted for publication are designated as technical reports by this branch and fulfill the requirements of the Contractor's Manual for such reports.) If an acknowledgment of ONR support is included on manuscripts submitted for publication, the following language is recommended: "These studies were aided by a contract between the Office of Naval Research, Department of the Navy and Inst. of Radiobiology & Biophysics (NR 119-221)."	Submitted at time they are sent to publisher	2 copies to: ONR Washington (see address above) 1 copy to: ONR Area Branch Office
b. REPRINTS	Reprints of papers and abstracts (Purchase of one-hundred (100) copies of reprints from contract funds is authorized).	When received from Publisher	20 copies to: Director, Naval Research Laboratory Attn: Technical Information Officer Washington 20, D. C. 14 copies to: ONR Washington (see address above) 1 Copy to: ONR Area Branch Office Other copies according to reprint distribution lists of investigators.
3. FINAL REPORT	Requirements for the final report are essentially those of the Semiannual Progress Report. Acceptance of final report must be certified by the scientific officer before payment of final voucher.	Upon termination of contract	Same as for Semiannual Progress Report

A37121