

February 21, 1957

Dr. George W. Beadle  
Chairman, Division of Biology  
California Institute of Technology  
Pasadena, California

Dear Dr. Beadle:

This is just to tell you that when I last talked to Mr. Consolazio he thought the grant application that you made on my behalf will come before the Board in May.

In the meantime I have received the attached letter from the N.I.H. I plan to spend two weeks at the N.I.H. in Washington in response to an earlier invitation. As long as I can operate under the rules of the University of Chicago I have enough flexibility to work out some sort of arrangements with them if this appears desirable. However, I would not want to complicate the proposed arrangement with the National Science Foundation by including in this arrangement the National Institutes of Health and take the ensuing risk of getting hopelessly entangled in the red tape.

Attached is also a copy of a letter from Dr. Bronk for your information and files.

Enclosed you will find a memo which might perhaps interest you. I do not yet know where I can best arrange for conducting this experiment but it seems to me that the experiments ought to be done unless Medawar retracts his story in the meantime.

I sent you earlier a copy of a letter which I wrote to Sewall Wright about the origin of congenital iso-agglutinins against the blood groups. In the meantime I have become rather convinced that this theory must be correct.

Sincerely,

Leo Szilard

m

cc: Dr. Max Delbrück

April 4, 1957

Mr. William Consolazio  
National Science Foundation  
Washington 25, D. C.

Dear Mr. Consolazio:

Enclosed is a letter which I received from the National Institutes of Health. I believe it would be inadvisable to enter into a complicated arrangement that would involve both the National Science Foundation and the National Institutes of Health, but I felt that I should let you have a copy of this letter in any case.

With kind personal regards,

Sincerely yours,

Leo Szilard

m  
Encl.

N.S.F.

April 25, 1957

Dr. George W. Beadle  
Biology Division  
California Institute of Technology  
Pasadena, California

Dear Dr. Beadle:

Unofficially word has reached me that our National Science Foundation project fell through. I understand that the Committee debated the issue for one hour on each of two consecutive days. I sort of assumed that the grant will come through, and I have therefore not made any alternate plans. It is conceivable that we could reapply to the National Science Foundation with certain modifications in the fall, but whether this would be desirable I can not say.

With kind personal regards,

Sincerely yours,

  
Leo Szilard

W.S.R.

April 25, 1957

Dr. Max Delbrück  
Biology Division  
California Institute of Technology  
Pasadena, California

Dear Max,

Attached you will find a copy of a letter which I wrote to Beadle about our National Science Foundation project, and which I am sending on to you for your information.

Many thanks for your help and efforts.

With kind regards,

Sincerely,

Leo Szilard

m  
Encl.

N.S.F.  
~~per file~~

April 22, 1957

Dr. Bernard Davis  
Department of Pharmacology  
Medical School  
New York University  
30th Street and First Avenue  
New York City, New York

Dear Bernie,

News has reached me unofficially that our National Science Foundation project fell through. I know, of course, that you have put up a good fight -- many thanks! I have sort of assumed that the grant will come through, and I have therefore not made any alternate plans.

I expect to be in New York on Monday and Tuesday, May 6th and 7th, and if you are in town at that time I hope to see you then.

With kind regards,

Sincerely,

Leo Szilard

NSF

April 25, 1957

Dr. T. T. Puck  
Department of Biophysics  
Medical School  
University of Colorado  
Denver, Colorado

Dear Ted,

Attached you will find a copy of a letter which I wrote to Beadle about our National Science Foundation project, and which I am sending on to you for your information.

Many thanks for your help and efforts.

With kind regards,

Sincerely,

Leo Szilard

m  
Encl.

N.S.R.  
April 25, 1957

Dr. Rollin Hotchkiss  
Rockefeller Institute for Medical Research  
66th Street and York Avenue  
New York City, New York

Dear Dr. Hotchkiss:

Attached you will find a copy of a letter which I wrote to Beadle about the National Science Foundation project, and which I am sending on to you for your information.

I have not had time to make any new plans as yet and I do not know if it will be possible for me to make arrangements that will enable me to spend a certain amount of time in New York City. This situation might also affect my relationship with the Rockefeller Institute since Dr. Bronk's proposal that I join the Institute as an Affiliate, which I have gratefully accepted, was predicated on the assumption that I shall spend an appreciable fraction of my time in New York.

I plan to be in New York Monday and Tuesday, May 6th and 7th, and if you are back by then, we might be able to talk about this further.

I hope you are having an enjoyable stay in Europe.

With kind regards,

Sincerely,

Leo Szilard

m  
Encl.

CALIFORNIA INSTITUTE OF TECHNOLOGY  
PASADENA, CALIFORNIA

DIVISION OF BIOLOGY

April 26, 1957

Dear Leo:

That is not good news. There will have to be some agonizing reappraisal, and first we will have to wait until we hear both officially and unofficially what went wrong.

Seems very doubtful to me that we could come back with a modified plan. What does Brook say? You still have a livelihood from Chicago I suppose.

Will write again when I know more.

John

Max



64 8 64 3 c  
64 8 200  
~~500~~  
100

Lab Science  
Fanno,

4/29/57  
4/29/57  
April 30, 1957

Dr. Bernard D. Davis  
Department of Pharmacology  
New York University College of Medicine  
550 First Avenue  
New York City 16, New York

Dear Bernie,

Many thanks for your letter of April 26th. I shall probably postpone my trip to New York, but I expect to be there for two days almost certainly before May 15th.

I believe I shall have a number of things to discuss with you and will in any case contact you over the telephone to see if you are free.

With kind regards,

Sincerely,

Leo Szilard

m

4/29/57  
4/29/57

NEW YORK UNIVERSITY--BELLEVUE MEDICAL CENTER  
NEW YORK UNIVERSITY COLLEGE OF MEDICINE  
550 FIRST AVENUE, NEW YORK 16, N.Y.

DEPARTMENT OF PHARMACOLOGY

OREGON 9-3200

April 26, 1957

Dr. Leo Szilard  
The University of Chicago  
The Enrico Fermi Institute  
for Nuclear Studies  
Chicago 37, Illinois

Dear Leo:

I wondered whether to try to locate you to let you know about the unfortunate result of the NSF meeting, and finally decided that Beadle would undoubtedly be contacting you soon. I had assumed, like you, that the variety of prominent names associated with this proposal would insure its approval. To my amazement it was apparent within a few minutes that there wasn't a chance of passage. I defended it as long as I could, and will tell you more about the story when I see you.

I will probably be in town <sup>when you come</sup> on May 6th, and certainly on the 7th. See you then.

Sincerely,



Bernard D. Davis

UNIVERSITY OF COLORADO  
MEDICAL CENTER  
4200 EAST NINTH AVENUE  
DENVER 20, COLORADO

COLORADO GENERAL HOSPITAL  
COLORADO PSYCHOPATHIC HOSPITAL  
SCHOOL OF MEDICINE

April 30, 1957

Dr. Leo Szilard  
The Enrico Fermi Institute for Nuclear Studies  
The University of Chicago  
Chicago 37, Illinois

Dear Leo:

I have just received your letter and phoned Beadle immediately. He tells me that he has already written you, and is also writing John Wilson for more details. In consulting about what our next move should be, Beadle advises waiting until we have learned all the details of the reason behind this action, so that we can make our next approach, either to the same or a different granting agency, more effective.

You may be sure we will press on with this program without delay.

Sincerely,



Theodore T. Puck

TTP:hw

To Szilard FROM Beadler DATE \_\_\_\_\_  
SUBJECT WST

I'm sorry to hear the  
bad news. I suppose the  
"unofficial" word is correct.

I'll try and find out  
from WST people whether my  
modified proposal is worth  
making. You let me know if  
you hear anything, will you?  
Regards  
Beadler

May 2, 1957

NIGHT LETTER

Dr. George Beadle, Department of Biology  
California Institute

UNDERSTAND FROM PUCK THAT YOU ARE CONTEMPLATING SOME FURTHER  
ACTION CONCERNING REJECTED GRANT STOP APPRECIATE THIS VERY MUCH  
BUT WOULD PREFER YOUR DELAYING UNTIL I HAVE CHANCE TO TALK WITH YOU  
REGARDS

Leo Szilard

BET MONEY

STAFF meeting at 1:30 p.m. ~

Geo Bayfield

MEGVIDS

DOAL MOUND BEEHIVE LOSS INVESTING SMALL I HAVE CHANCE TO LIVE WITH YOU  
ACTION CONCERNING BEHOLDEN BEHOLDEN BEHOLDEN BEHOLDEN BEHOLDEN BEHOLDEN BEHOLDEN  
UNDERSTAND FROM BACK HAVE YOU WERE COMPLETING SOME BUSINESS

California Institute  
Department of Biology

NIGHT TALKER

Dr. George Bayfield

MAY 5, 1951

V  
C

Keep  
meas

May 8, 1957

Dr. Theodore T. Puck  
Department of Biophysics  
Medical School  
University of Colorado  
Denver, Colorado

Dear Puck,

Many thanks for your very kind letter. I should be more disturbed about this situation if it were not for the fact that my work is going exceedingly well. I am quite engrossed in it for the moment, and cannot think of anything else. I plan to take some time before making any new plans, and I have written to Beadle accordingly. I appreciate it very much that you and Beadle intend to continue your efforts.

With kind regards,

Sincerely,

Leo Szilard



May 8, 1957

Dr. George W. Beadle  
Chairman, Division of Biology  
California Institute of Technology  
Pasadena, California

Dear Dr. Beadle:

Many thanks for the very kind note which you sent me. It arrived in Chicago while I was in Gatlinburg at a conference on Aging. My secretary told me over the telephone of a letter that came in from Puck which, she said, indicated that you contemplated some action, and I have therefore asked her to send you a telegram, of which you will find attached a confirmation copy.

Mr. Consolazio was in Gatlinburg, and he told me something about what happened. I am not disturbed about what happened but I would like to have some time to think about what I really would like to do next. I cannot do this right now because I am engrossed in some work which absorbs nearly 100% of my attention. It is biology, and I think that you will like it if it is as good as it right now seems to be.

I shall write you again when my thoughts clear further.

I really am very grateful for your willingness to pursue this matter further.

With kind personal regards,

Sincerely,

Leo Szilard

m  
Encl.

May 8, 1957

Dr. Max Delbrück  
Division of Biology  
California Institute of Technology  
Pasadena, California

Dear Max,

Many thanks for your very kind note. My position in Chicago is unchanged, and I am in no very great hurry to look actively for something else. I should like to think a little bit more about this before any new moves are made, but I appreciate your and Beadle's willingness to pursue this matter further.

Right now I am very much engrossed in some work which looks quite promising, but I assume the spell will pass soon and I can then think about personal matter.

With kind regards,

Sincerely,

Leo Szilard

The University of Chicago

Comptroller Form 47  
25M

# PETTY CASH RECEIPT

No. \_\_\_\_\_

Date May 13, 1957

Pay to Western Union

\$ 1.32

For Wire from Leo Szilard to Dr. T.T. Puck, Denver, Colorado

Charge Account Institute for Nuclear Studies

Signed \_\_\_\_\_

Approved \_\_\_\_\_

Department Head

Received above amount:

Signed \_\_\_\_\_

REQ'N No.	Doc. No.	Acct. No.	SUB Acct.	SUB SUB No.	Doc CODE	NET AMOUNT
4-5420-35-1000					24	
					24	
					24	

National  
Science Found.

UNIVERSITY OF COLORADO  
MEDICAL CENTER  
4200 EAST NINTH AVENUE  
DENVER 20, COLORADO

DEPARTMENT OF BIOPHYSICS

COLORADO GENERAL HOSPITAL  
COLORADO PSYCHOPATHIC HOSPITAL  
SCHOOL OF MEDICINE

May 7, 1957

Dr. Leo Szilard  
c/o The Quadrangle Club  
The University of Chicago  
Chicago 37, Illinois

Dear Leo:

I will be in Chicago between trains on May 15th. If you are there, perhaps we could meet that afternoon for a bit to talk about the next move in our plans. I have not yet heard from Beadle, but would like to see you to learn your thoughts.

With all regards,

Sincerely,

Ted

Theodore T. Puck

TTP:hw

DOMESTIC SERVICE	
Check the class of service desired; otherwise this message will be sent as a fast telegram	
TELEGRAM	
DAY LETTER	
NIGHT LETTER	

\$  
S  
E

# WESTERN UNION

## TELEGRAM

1206 (4-55)

W. P. MARSHALL, PRESIDENT

INTERNATIONAL SERVICE	
Check the class of service desired; otherwise the message will be sent at the full rate	
FULL RATE	
LETTER TELEGRAM	
SHORE-SHIP	

NO. WDS. -CL. OF SVC.	PD. OR COLL.	CASH NO.	CHARGE TO THE ACCOUNT OF	TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

NIGHT LETTER

May 13, 1957

Dr. Theodore T. Puck  
 Department of Biophysics  
 University of Colorado Medical Center  
 4200 East Ninth Avenue  
 Denver 20, Colorado

THANKS FOR LETTER AM TIED UP THROUGHOUT MAY 15th BUT IF YOU ARE ON  
 THE CAMPUS ANYWAY PLEASE PHONE ME AT EXTENSION 3789 REGARDS

Leo Szilard

To Szilard FROM W. B. DATE \_\_\_\_\_  
SUBJECT NSF

Thanks for your letter.  
I have had a talk with  
J. Wilson who presumably told me  
essentially what Conzalezio told you.

Pending further deliberations,  
would we request withdrawal of  
the proposal? Then there would never  
be an official no and another  
plan could be presented later if

this seems desirable,

Regards

R

John  
N.S.F.

May 14, 1957

Dr. George W. Beadle  
Division of Biology  
California Institute of Technology  
Pasadena, California

Dear Dr. Beadle:

Many thanks for your note. Consolazio had written me and suggested that I withdraw the application, and I intend to do just this at the time I answer his letter.

With kind regards,

Sincerely,

Leo Szilard



May 25, 1956

CONFIDENTIAL MEMORANDUM:

ON A ROVING PROFESSORSHIP FOR LEO SZILARD

by

Dr. George W. Beadle  
Division of Biology  
California Institute of  
Technology

Dr. Bernard D. Davis  
Department of Pharmacology  
New York University  
College of Medicine

Dr. Theodore Fick  
Department of Biophysics  
University of Colorado  
Medical School

We are exploring the possibility of setting up a Roving Research Professorship or a Fellowship-at-large for Dr. Leo Szilard, at present Professor of Biophysics at the University of Chicago. We believe such a position would offer the best opportunity for full exercise of his remarkable talents; and in addition it should eliminate his serious retirement problem, whose genesis is described below.

As we visualize this position, it would formally associate him at the outset with our three departments-- an arrangement we would greatly desire. At the same time, since we are convinced that a maximum of flexibility will enable him to function most effectively, he would be left free to pursue his scientific interests at any research institute or university of his choice. Dr. Rollin Hotchkiss, speaking for the Rockefeller Institute for Medical Research, has proposed that this institution be included also in the plan; and we assume the University of Chicago would wish to continue its association with Szilard.

Officers of the National Science Foundation whom we have approached favor, both in principle and in this case in particular, the idea of creating such a position. The financial assistance we anticipate from this agency, however, will not cover a sufficiently long period, and so we are seeking additional funds from private foundations and individuals.

There are not many scientists for whom a Roving Professorship would seem appropriate, but we believe Szilard is one. In addition to producing a number of discoveries of the highest rank, Szilard has been an unusually effective catalyst in science. In recent years he has engaged extensively in visiting other laboratories, where he has been most generous in giving thoughtful and deep attention to the work in progress. He has a unique ability to grasp instantly the most varied problems, to seize upon their significant aspects, and

to apply to them unusual imaginative and critical powers. These visits have often led to valuable new experiments and have given to many young biologists a much enhanced sense of the distinction between significant and trivial problems. The Roving Professorship we are trying to arrange would regularize such peripatetic activities and would at the same time provide the opportunity, if his interests so directed, for an extended period of work at a single institution.

In order to put the problem concerning Szilard in the proper perspective, we wish to refer here to a few historical facts.

More, perhaps, than any other single individual, Szilard was responsible for getting the United States government started on the development of atomic energy. The crucial discovery was made in March, 1939, when three groups working independently (Szilard and Zinn; Anderson and Fermi; Halban, Joliot, and Kowarsky) found that neutrons were emitted in the fission of uranium. This meant that some uranium-containing system might be able to sustain a chain reaction. Shortly thereafter Fermi, Szilard, and Anderson jointly showed that a uranium-water system came fairly close to sustaining a chain reaction, and it thus became clear that the liberation of atomic energy on an industrial scale might be at hand.

These results were obtained in the spring of 1939, yet for a period of eight months, stretching from June, 1939 to March, 1940, not a single experiment on the chain reaction was in progress anywhere in the United States. No one can tell how much longer this state of inactivity would have lasted had not Szilard become convinced in July 1939 that a chain reaction could be set up in a system composed of uranium and graphite.

Szilard convinced Einstein that this possibility must be taken seriously, and that the government ought to be so advised. On August 2, 1939, Einstein wrote to President Roosevelt:

Some recent work by E. Fermi and L. Szilard, which has been communicated to me in manuscript, leads me to expect that the element uranium may be turned into a new and important source of energy in the immediate future. Certain aspects of the situation which has arisen seem to call for watchfulness and, if necessary, quick action on the part of the Administration. I believe, therefore, that it is my duty to bring to your attention the following facts and recommendations:

In the course of the last four months it has been made probable - through the work of Joliot in France as well as Fermi and Szilard in America - that it may become possible to set up a nuclear chain reaction in a large mass of uranium by which vast amounts of new radium-like elements would be generated. Now it appears almost certain that this could be achieved in the immediate future.

Dr. Alexander Sachs personally transmitted Einstein's letter to President Roosevelt, together with a memorandum written by Szilard which contained information on which Einstein's letter was based.

In response to Einstein's letter, Roosevelt appointed a committee which first

met in October, 1939. In March, 1940 this Committee made a \$6,000 grant to Columbia University for the purchase of graphite, and only then did work on the chain reaction get under way.

A patent on the chain-reacting graphite-uranium system, subsequently issued to the government, named Fermi and Szilard as the inventors (see information released by the government and reported in the New York Times of May 8, 1955). This system was used in the pile that produced the first chain reaction at Stagg Field on the campus of the University of Chicago on December 2, 1942. And this system was also used in the Hanford plant which produced the plutonium for the atomic bomb. The same system is now used for electric power production in England. According to the Times report, "the patent is owned by the Atomic Energy Commission . . . issuance of the patent establishes the priority of the Fermi-Szilard invention, and protects the government's interests."

Szilard did not profit financially from this invention, which he assigned to the government in 1943.

After the war Szilard joined the faculty of the University of Chicago and his main interest shifted to biophysics. He has made important contributions to this field. Jointly with Dr. Aaron Novick he developed the Chemostat, which permits the study of growing bacterial populations in a controlled steady state; and its use has led to important discoveries concerning mutations and adaptive enzyme formation.

At Chicago Szilard was initially attached to the Institute of Radiobiology and Biophysics, which had been established by Dr. Robert Hutchins when he was Chancellor. This Institute was recently discontinued, and on July 1, 1946, Szilard will join the Institute of Nuclear Studies of the University. While this assignment leaves him free to pursue his interests in biology, it does not provide an appropriate setting for these activities.

According to the present schedule, if he is retired by the age of 65, some seven years from now, Szilard would have to live on an income of \$113 per month provided by Teachers' Annuity. (To this would be added social security benefits if he had no other earned income.) Szilard is in this anomalous position because he entered this country from Europe shortly before World War II, worked on a government project during the war, and did not take regular academic employment until 1946.

If the issue were merely Szilard's financial problem he could perhaps solve it by taking a highly paid industrial position. Our concern, however, is to keep him active in basic science. This could be accomplished by setting up a fellowship-at-large providing for sufficiently long-term support. We believe we can count on assistance from the National Science Foundation amounting to a total of about \$90,000 payable in five installments. An about equal amount would be needed from

4.

other sources in order to assure an adequate basic income during his lifetime.

We believe the absence of an age limit in this arrangement is appropriate in view of both the nature of the position and the person involved. A fixed retirement age is customary for scientists who hold an administrative position or occupy a fixed amount of laboratory space, but neither of these considerations pertains to a fellowship-at-large. And as long as Szilard holds such a position and requires laboratory facilities for his research he should be able to secure these on a short-term basis.

We believe it important to enable Szilard to continue to remain active in the field of science as long as possible, with adequate security, and under circumstances that permit him to be most effective. A fellowship-at-large without set age limit seems the best instrument for accomplishing this purpose. We would like to enlist the aid of interested parties in working out the details of such a plan and putting it into effect.

N.S.F.

June 14, 1957

Mr. William Conselazio  
National Science Foundation  
Washington 25, D.C.

Dear Mr. Conselazio:

Many thanks for your kind letter of April 23rd. I am writing to say that I wish to withdraw my application for the research grant which you have been processing.

I wish to take this opportunity to thank you for all the trouble you have taken in this matter and for your good intentions.

With kind personal regards,

Sincerely yours,

Leo Szilard

NATIONAL SCIENCE FOUNDATION

WASHINGTON 25, D. C.

April 23, 1957

Dr. Leo Szilard  
The Enrico Fermi Institute  
for Nuclear Studies  
University of Chicago  
Chicago 37, Illinois

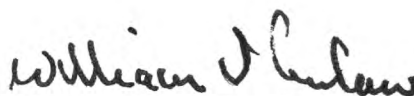
Dear Doctor Szilard:

First let me report to you my unsuccessful attempt at convincing the Foundation to support your proposal to undertake a program in theoretical and quantitative biology. I failed to convince that the arrangement you proposed was likely to promote continued productivity.

May I suggest that you withdraw the present application. Following our discussions in Chicago, if it is your opinion that another application merits reconsideration, by all means, resubmit.

Best wishes and

Sincerely yours,



William V. Consolazio  
Program Director  
Molecular Biology