DEPARTMENT OF GENETICS
Professor Joshua Lederberg

September 21, 1965

Area Code 415

321-1200

Dr. John Z. Bowers
President
Macy Foundation
16 West 46th Street
New York, New York

Reference: Planning for Advanced Computer Facility at Stanford Medical School

Dear John:

Shortly after your phone call, I consulted Dean Glaser. You will not be surprised
that he was as pleased as I was to learn of your positive interest in our hopes to
establish "ACME", a first rate computer facility and data network. At present we
are completing a proposal to NIH for the computer. We do not believe we can hope
for more than $500,000 a year, perhaps beginning April 1, 1966, from this source.

In planning the budget for this, we find a definite hiatus – in start-up time and
in staff for system planning. We would therefore be very much relieved to be able
to have a grant of $80,000 for the calendar year 1966, intended for the following
purposes, mainly staff appointments which we hope to fill as promptly as possible,
and can expect to be able to start, on the average, the first of the year:

	Base Salary	Fringe Benefits	Total
Director for ACME	$20,000	$1,700	
Sr. Electrical Engineer	18,000	1,530	
Electrical Engineer	15,000	1,270	
	$53,000	$4,500	$57,500
Installation & Operating Expenses, including cabling and test equipment			$22,500
			$80,000

We are pushing hard to get ACME working by May. The early appointment of the
planning group, which these funds would support, is an obvious necessity for an orderly
program that can take full, efficient advantage of costly facilities promptly on
their installation. These personnel are eminently employable on other projects, but
we should have coverage of a year's salary before recruiting them.

The Director would be a computer systems engineer, or a programming system analyst.
The engineers would be telemetry or communications specialists. The salaries are
relatively high, but not in relation to the responsibility and performance demanded
and to the market for such skills. Their main functions in the pre-installation
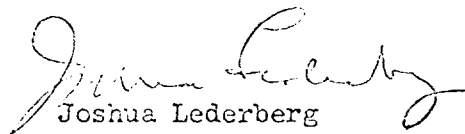period will be:

1. Planning the physical installation

2. Consulting with medical school faculty on the services to be set up, and training their technicians

3. Designing the data network, i.e., the most effective media for collecting data from many participating laboratories for ACME. The technical decisions might be hard wires (twisted pairs to coaxial cable), phone lines, paper or magnetic tape or graph charts carried to the computer, etc.

4. Installing and testing hard wire connections. From a few previous experiences, this always takes weeks in practice versus days in principle. Indoctrination of experimenters how to use their terminals and how to hook up their instruments to them.

5. Specifications to other users on compatible recording equipment.

6. Negotiate with IBM on details of equipment and its delivery.

7. Inform faculty on programming systems and details of services: "how to use the computer".

Some of these functions may be good academic challenges in "biomedical engineering" and we will steer this new program of the Engineering School our way as much as possible.

The administration of these funds will be in the hands of the Computer Policy Committee.

We feel that a year's production and time for maneuver will get us on a very firm footing - we already have quite a few irons in the fire - but I will of course not guarantee that we will not look to you for help to move up another step. Meanwhile a proportionately small amount of money will be most useful just because of the speed that you can react to our needs.

Many thanks, and best wishes,

Joshua Lederberg
Professor of Genetics
(Chairman, Computer Policy Committee)

Enclosure: Notes on NIH application for ACME.

cc: Dr. Robert J. Glaser
Dean, School of Medicine

P.S.   Are you able to consider a hopefully nominal, second use of these funds --
namely an insurance against catastrophe -- that would help us move briskly. For
example, an unexpected delay in NIH funding could throw our whole plan out of
kilter and we might then ask whether we can use these funds somewhat differently
for an emergency bailout. Alternatively, there may be a period after we have
informal confirmation but before formal award which overlaps the gestation time
of the order to IBM. It would be advantageous to have this appear on our books
as a charge to the Macy Foundation grant; only very bad luck or miscalculation
would end up as an actual outlay for this purpose.