It was, on motion,

UNIVERSITY OF WISCONSIN - GENETICS - LEDERBERG

RESOLVED that the sum of Twenty-five thousand dollars ($25,000), RF 53108 or as much thereof as may be necessary, be, and it is hereby, appropriated to the UNIVERSITY OF WISCONSIN toward support of a program of research in genetics under the direction of Associate Professor Joshua Lederberg, during the four-year period beginning September 1, 1953, not more than $7,500 to be available in any one year.

The following considerations were presented:

Natural Sciences and Agriculture: Biology - Genetics

Previous Interest: A grant in aid of $7,500 to the University of Wisconsin provided support for research in genetics by Professor Joshua Lederberg during the three years ending April 30, 1951. A current grant of $8,000 for the same purpose will expire August 31, 1953.

General Description: Professor Joshua Lederberg is one of the leading experts in the field of biochemical genetics, having taken his Doctor's training under Professor E. L. Tatum when the latter was at Yale University. Since joining the Department of Genetics at the University of Wisconsin, Professor Lederberg has become recognized as one of the most original and productive workers in the growing field of bacterial genetics. He is, in fact, one of the pioneers in that field, since he originally became convinced, even before he went to work under Dr. Tatum, that bacteria at times demonstrate the phenomena of "sex," or more specifically, the phenomena of gene transfer between different strains.

It is interesting to note that the scientific study of the mechanisms of heredity has progressively advanced toward simpler and simpler material. Beginning with Mendel's use of garden plants, the science of genetics next utilized the fruit fly, Drosophila melanogaster. More recently great advances were made through the use of the bread mold, Neurospora. Still more recently, a growing group of scientists have chosen bacteria and even viruses for their studies in genetics. It is in this last field that Professor Lederberg is recognized as a pioneer and as a leader.

Dr. Lederberg's more recent work at the University of Wisconsin has shed a great deal of light on the intimate life habits of two groups of bacteria: the colon bacilli and the paratyphoid bacilli. On the one hand,

these studies have helped to explain how pathogenic bacteria develop new forms capable of resisting drugs or of initiating disease in previously immune hosts; and, on the other, they provide the theoretical background for the breeding in the laboratory of special bacterial types for medical and other applications, as well as for more fundamental studies in genetics.

Finances: Assistance in the amount of $25,000 over four years is recommended. Of this amount, approximately 70 per cent would be utilized for personnel (project associates, assistants, and hourly help), approximately 20 per cent for expendable chemical supplies and glassware, and approximately 10 per cent for some small items of permanent equipment.

Future Implications: Since Professor Lederberg is one of the young and rapidly developing specialists in this important field, it is probable that the Division will wish to recommend further assistance for him.
