

May 16, 1955

REPORT ON RESEARCH PROJECTS
for the
FISCAL YEAR 1954-55

I. Name LEDERBERG Joshua Dept. Genetics 54:217 Proj. No. 217

Title of project Genetics of Bacteria

II. Personnel: Helen (Byers) Bernstein, M.A. Res Ass~~t~~
Aleck Bernstein, M.D. Proj. Assoc.
M.L. Morse Ph.D. Res. Asst. and Proj. Assoc.
R. E. Wright, M.S. Res. Asst.

III. Statement of other financial support, if any, for this project:
National Institutes of Health 8 500
Rockefeller Foundation 6 500

IV. Brief statement of specific progress made during the year:

1. Further progress on morphology and genetics of conjugal pairing in *E. coli*
2. Position effect and relation of bacterial virus to genes in transduction in *E. coli*.
3. Search for fertile strains of *E. coli* concerned with infantile gastroenteritis—strains were found but for other reasons not suitable for immunogenetic studies.
4. Heterokaryosis in *Streptomyces* ~~HEMIXI~~ species.
5. Further details on sex compatibility system in *E. coli*.
6. Differentiation of antigenic phases of *Salmonella* by dye agglutination.

V. Publications that have appeared in print from July 1, 1954, to June 30, 1955.

Bernstein, A., and Lederberg, J. ~~Ag~~ Agglutination of motile *Salmonellas* by acridines.
J. Bact. 69:142-146, 1955.

Lederberg, J. A simple method for isolating single microbes. *J. Bact.* 68:258-259, 1955.

Lederberg, J. *Genetics and Microbiology. Perspectives and Horizons in Microbiology,*
Rutgers Univ. Press, 24-39, 1955.

VI. Manuscripts accepted for publication but not yet printed:

Lederberg, J. Recombination mechanisms in bacteria. Symposium on Genetic Recombination,
Oak Ridge National Laboratory. Suppl. 2, *Jour. Comp. Cell. Physiol.*, 1955.

Lederberg, J. and Lederberg, E.M. Infection and heredity. Growth Symposium (1955);
to be published by Princeton Univ. Press '56 or '57.

Lederberg, J. Prospects for a genetics of somatic and tumor cells. *Ann. N.Y. Acad. Sci.*

The pink copy should be returned to the Graduate School Office on or before
August 1, 1955. The blue copy is for your file.