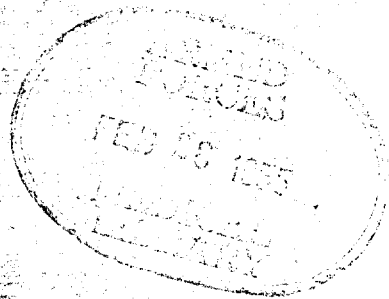


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RECORDS

of the

GENETICS SOCIETY OF AMERICA

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1954

GENETICS, the important service the journal performs for members of the Society, and the need for extra pages in the journal in order that publications be not delayed, the Executive Committee voted to make a grant of \$500.00 to GENETICS toward publication costs. The money is to be taken from the Sustaining Membership Account which is part of the Special Fund set up for special purposes to be used at the discretion of the Executive Committee. 2. To Local Committee, Tenth Congress: In order to help with the initial expenses in organizing the Tenth International Congress of Genetics, the Executive Committee made a grant of \$300.00 to the Local Committee at McGill University. The money is to be taken from the Royalty Fund which is part of the Special Fund.

A committee on liaison to coordinate the work of GENETICS and of the Society, requested at the Business Meeting in 1952, has been established. The committee members are the Society Representative on the Editorial Board (Dr. Sonneborn), Dr. Brink, and the Secretary of the Society.

Committee Reports

Committee on Aid to Geneticists Abroad: R. E. Cleland, Chairman, reported that the Committee had not been active during the year. The Committee recommended that it be retained on an inactive basis in order to be available for emergency situations, and that it be given authority to use its funds to send food parcels where that seems feasible and desirable. A motion to approve the request was adopted.

Public Education and Scientific Freedom: Curt Stern, Chairman, reported that a resolution to be presented by a member of the Society had been considered; the resolution was not yet in final form. The Committee has been looking for someone to write a pamphlet which will give information about opportunities in the science of genetics and about the qualifications required of workers in the field; a member of the Society has agreed to prepare the booklet.

Travel Committee for the IX International Congress of Genetics:
Members: R. C. Cook, K. W. Cooper, O. J. Eigsti, M. T. Jenkins, F. J. Ryan (chairman), B. Wallace.)

"The Travel Committee was constituted by ex-President Gowen and charged with facilitating the travel of members of the Genetics Society of America to the IX International Congress of Genetics at Bellagio, Italy, August 24-31, 1953.

"It considered its task to be two-fold.

"1. To help members make their travel reservations through the distribution of information and the selection of, and cooperation with, an official Travel Agency.

"2. To attempt to raise funds to help finance the travel of members.

"The first objective was met by notifying the membership of our activities through the general distribution of a bulletin and a questionnaire and through notices in the program of the 21st Annual Meeting of the G. S. A. at

of the action of this radiation. More likely the increased efficiency is due to a greater than average nitrogen content for the *Drosophila* gonad.
 *Research carried out at Brookhaven National Laboratory under the auspices of the U. S. Atomic Energy Commission.)

LEDERBERG, ESTHER M., University of Wisconsin, Madison, Wis.
The inheritance of lysogenicity in interstrain crosses of *Escherichia coli*.

Of 50 diverse fertile strains, four proved to be sensitive to and lysogenized by the bacteriophage lambda carried by strain K-12. Crosses within these strains indicate an L_p locus determining lysogenicity and linked to Gal as in K-12. Each new strain lysogenized by lambda shows a more limited output of plaques when tested on K-12 than on the other sensitive indicators. Similarly, K-12 is more resistant than the other sensitives to free lambda originating from the other strains. By testing for sensitivity to both sources of lambda, and for lysogenicity on each indicator, four phenotypes are delineated: two lysogenic and two sensitive. These relationships are analogous to the host-induced modifications of lambda described by Bertani and Weigle (J. Bact. 65, 113). Whenever lysogenic x sensitive crosses involve K-12 as one parent, all four possible recombinant classes are found in the progeny, thus establishing a second locus, Mp, which modifies the expression of L_p . K-12 occurs as $Mp^+L_p^+$ (lysogenic) or $Mp^+L_p^s$ (sensitive); the other four strains as $Mp^sL_p^+$ (modified lysogenic) or $Mp^sL_p^s$ (modified sensitive). Linkage of Mp to the L_p -Gal loci was not demonstrated. Crosses reciprocal with respect to F (compatibility factor) differed in yield but not in the type of recombinants. The absence of sensitives from crosses of lysogenics segregating for Mp makes it likely that lambda prophage remains fixed to L_p , rather than Mp, in all lines.

LEDERBERG, J., University of Wisconsin, Madison, Wis. Phase variation in Salmonella. — The flagella carried by cells of a given serotype occur in two alternative phases (specific/group or 1 and 2) which are genetically conservative. The alternation may occur at a rate of 10^{-4} per generation (B. Stocker) or often much less, and superficially resembles point mutation. Genetic transduction analysis (Lederberg and Edwards, J. Immunol. 71, 232) has shown, however, that the alternative specificities are controlled by two distinct loci, H_1 and H_2 , corresponding to the two homologous series of antigens, and accounting for the oscillation between just two states. The mechanism of genetic differentiation of the phases has not been settled; it might depend on the cytoplasm (as in *Paramecium*) or on the state of a third locus. However, the correlation found between the antigenic state of the donor cells and the transductive competence of phage lysates from them suggests a third alternative: that the differentiation is based on the states of the H_1 and H_2 loci themselves. — In addition, certain other antigenic variations, so-called "artificial phases" have been found to behave not as phasic oscillations but as point mutations of serological specificity, e.g. H_1^b to H_1^{Z33} .

LEFEVRE, G., JR., and P. C. FARNSWORTH, University of Utah, Salt Lake City, Utah. Mutational isoallelism at the yellow and white loci in