

# UNIVERSITY of PENNSYLVANIA

PHILADELPHIA 4

## *The School of Medicine*

DEPARTMENT OF DERMATOLOGY AND SYPHILOLOGY  
AND  
DEPARTMENT OF MICROBIOLOGY  
EDWARD D. DELAMATER, M.D.  
*Research Professor*

March 13, 1953

Dr. Joshua Lederberg  
Department of Genetics  
University of Wisconsin  
Madison 6, Wis.

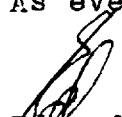
Dear Josh:

Thanks for your notes of March 8. I am very sorry that you don't feel that you would have enough to say, but suspect that your invited speech will prove to contain a great deal. I am looking forward to hearing it.

Sorry I forgot about the wire concerning recombination in megatherium. Three individuals have now produced evidence for recombination in megatherium, Szybalski at Cold Spring Harbor, who did this while working with us on a joint project, Yaverbaum of my own laboratory, and Hunter of my own laboratory. The work is progressing nicely, although at the present time is still preliminary. I feel, however, that the proof is there, with high recombinant counts under certain biochemical conditions. All this for the future. At the present time we are working on the proper technique for handling the recombinant material cytologically, and hope to have enough to present at least preliminary comments at both Lake Como and Rome.

We are looking forward to seeing you. Best personal regards to you and your wife and Jim Crow.

As ever,

  
Edward D. DeLamater, M. D.  
Research Professor

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THE BIOLOGICAL LABORATORY  
Cold Spring Harbor, New York

During the summer of 1952 four courses will be given, designed to acquaint the student with some of the techniques used in bacteriophage research, bacterial genetics, microbial cytology, and population genetics, and with the recent results of such work. The courses will consist of intensive laboratory and discussion periods, and may be expected to occupy the student's full time.

(1) Bacterial Viruses.--June 23 to July 12. Dr. A. H. Doermann, Oak Ridge National Laboratory. Limited to 14 students. Fee, \$70.

Isolation, preparation, and assay of phage; microscopic observation of lysis; specific antisera reactions; resistance patterns of bacterial mutants; one-step growth; single-cell bursts; mixed multiple infection; the mutual-exclusion effect; exchange of genetic characters; ultraviolet irradiation and photoreactivation.

(2) Bacterial Genetics.--July 16 to August 5. E. M. Witkin, V. Bryson, M. Demerec, and staff. Limited to 14 students. Fee, \$70.

Isolation and analysis of mutants resistant to phages, radiation, and antibiotics, fermentation mutants, and nutritional-deficiency mutants; proof of mutational origin of variants; measurement of spontaneous-mutation rates by several methods, including use of chemostat; induction of mutations by radiation and chemicals; study of sexual recombination; study of cross-resistance to antibiotics.

(3) Cytology of Microorganisms.--August 11 to August 30. Dr. E. D. DeLamater, University of Pennsylvania. Limited to 10 students. Fee, \$70.

Staining of bacteria, yeasts, fungi (*Neurospora*), and blue-green algae for nuclear structure and for mitochondria, using various methods (Feulgen, Piekarski-Robinow, DeLamater, aceto-orcein); study of mitosis in bacteria (*B. megatherium*, *M. cryophilus*); use of tetrazoles for study of mitochondria in bacteria and yeast; phase-contrast microscopy for the study of microorganisms.

Students should bring their own research microscopes, with light and filters. Limited number of microscopes available for rent at \$15.

(4) Population Genetics.--June 23 to July 31. Dr. R. P. Levine, Amherst College. Limited to 10 students. Fee, \$80.

Population-cage techniques for study of the action of selection in *Drosophila* populations; sexual isolation; frequency of lethal genes and their allelism in *Drosophila*; cytological techniques; representative species of *Drosophila* groups; factors affecting fertility, fecundity, and longevity; building up of marker stocks; analysis of natural hybridization (field trips to study certain plant material). Some time will be available for the student to carry out or continue an individual research problem.

Students should bring their own dissecting microscopes. Limited number for rent at \$15.

Address: Biological Laboratory  
Cold Spring Harbor, L.I.  
New York