

# 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*

June 9, 1952

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

Dear Josh:

Thanks for your letter of May 21 and the preparation of K-12. I am delighted to hear that you are "morally convinced of mitosis". I have studied your slide which is excellent, and in which we have had no difficulty in demonstrating various mitotic stages. In comparable material of our own we recently have developed a modification of our technique in which the cells are crushed, and in these it appears to be possible to completely characterize the three chromosomes. We feel that there are three haploid chromosomes in K-12, and you apparently have seen similar numbers. I think that the odd forms that you note containing more than three granules probably represent anaphase stages of separation of the sister chromosomes.

We have submitted titles to be presented before the Genetics Society at Cornell in September on demonstration of mitosis in Escherichia coli, and further studies on the prophase chromosomes of Bacillus megatherium. I would greatly appreciate your permission to include in this work some photographs from the preparation which you so kindly sent us.

Concerning the tetrazolium, we agree that the granule is probably a localized deposit and not a stain. We have had the same experience with the reddish tetrazoles as you have, and we are not entirely satisfied with them. I wonder whether you could not use a very dilute solution of methylene blue as the tag you require.

Thanks for the reprints. Best personal regards to your good wife, Zinder and the others. Zinder's paper is not only beautiful, but was well received in Boston.

As ever,

  
Edward D. DeLamater, M. D.  
Research Professor

EDD/aj