

THE UNIVERSITY OF WISCONSIN  
COLLEGE OF AGRICULTURE

Madison 6

December 9, 1953

DEPARTMENT OF GENETICS

AIRMAIL

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Dear Luca:

First of all, let me acknowledge with sincere thanks the safe arrival of a group of cultures and of somewhat more than 250 reprints of our joint paper for the Rome symposium. I am really sorry that the supply of these reprints had to be so limited but I suppose there is nothing that can be done about it now. If you should, however, have some secondary opportunity to re-publish this paper in an Italian journal which would then permit a larger reprint distribution, I think it would be a valuable enterprise. I would be prepared to collaborate with you on some further revisions which might increase the precision of some of the arguments. As I see it this may well become a definitive contribution on the subject combining, as it does, our different approaches to the problem. As to other publications in the congresses, I hope that you will not be disturbed if I suggest that we do nothing more about them. I am not at the immediate present anxious to do any further publication until I have made somewhat more substantial progress, at least in my own mind. However, I hope that you will feel free to act independently under your own name as you see fit. Through the good offices of Bruce Stocker we succeeded in getting a set of the abstracts of the Rome meeting. Somewhat belatedly, too, I received the preliminary abstracts for the Genetics meetings. I hope that the fee which I deposited will also cover the cost of the eventual full publication of the proceedings. If not, may I impose upon you to reserve in my name a copy of these proceedings at the time that they are distributed for which I will, of course, hasten to reimburse you. To go back again to the reprints, I hope that you will give us an opportunity to make payment for our share of them. In view of the short supply it might well be desirable for us to coordinate our distribution of them. Obviously, American workers should receive this paper from this department. In addition, there are a few persons in Europe with whom I have had a regular exchange of publications and those which I might have some doubt as to overlapping your own list I have gone ahead and included this reprint in a recent mailing. I will shortly send you a list of these European authors as well as a summary of those individuals to whom I would anticipate you would send this reprint but which I would like to insure. I would be happy to exchange the same favor with you. My supply of our joint paper in the Journal of General Microbiology is beginning to run very low. It would help my own decisions if I could have an account from you of your schedule, in a general way, of disposing of these reprints.

I was especially interested to note your hopeful (or not so hopeful) remarks about a fellowship here in 1954. The period October to December would be ideal and I do hope that some arrangement will be possible--if not for this time, for one perhaps even slightly longer. As I have mentioned to you before, you can be assured of financial support from us during the time that you will be here and you will therefore be obliged only to find some basis for meeting your travel expenses. If there is anything at all that I can do to facilitate your efforts, please hasten to tell me about it.

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Thank you very much indeed for the delightful pictures for which you posed for Miss Byers. We are very happy to have them.

Esther has taken in hand the cultures that you sent and asks me to transmit the following report.

As we had feared, on the basis of our own experience, each of the three cultures, W583, W677 and W945 was mixed in regard to maltose fermentation. However, it was not difficult to re-isolate pure maltose negative components. We were especially interested in W583. From this we were able to isolate the following types:  $\text{Mal}^+ \text{Lp}_2^S$ ,  $\text{Mal}^+ \text{Lp}_2^R$ , and  $\text{Mal}^- \text{Lp}_2^R$  together with an occasional slow fermenter. Unfortunately, Esther was unable to find a single colony of the most desired type, namely  $\text{Mal}^- \text{Lp}_2^S$ . We have found this accumulation of maltose positive reversions to be quite troublesome in stocks of this line that have been kept over long periods of time on the usual culture media. However, in experiments starting from freshly isolated maltose negative colonies we have never had the slightest difficulty with reversion and, in fact, in those experiments where reversions are looked for they are not too often found. I would expect that we are dealing here with a case of relatively rare mutation but one which has a substantial selective advantage over long periods of cultivation on nutrient agar. I hope that this will not have imposed difficulties in the way of your previous linkage studies, as they might well have if the suspensions used in the crosses were mixtures similar to those represented in the cultures recently received. The other markers in these strains seem to be in good order.

Concerning my own cytological work, which is most of what I am doing at the present moment, I did manage to overcome troubles on the giemsa staining procedure. These apparently stemmed from the necessity of using buffer of Ph5 rather than Ph7 as customarily specified. However, I have not made any cytological observations on stained material which appear to be of any further significance. At the instant I am developing a technique for the isolation of single cells with very promising results. The technique consists simply of making small droplets by hand on a glass slide covered with mineral oil. These droplets are then searched and those which have just one cell are selected for further observation in an obvious way. The point of this study is to substantiate earlier findings again verified by more recent experiments on Hfr by F-crosses. These crosses can be conducted as you know without very much difficulty on simple EMB lactose medium where zygote cells result in characteristic segregating colonies. The point is now, that further analysis has shown that many of these colonies contain not merely the F- parents and recombinants but the intact Hfr parent, as well. The implications of this finding as concerns the constitution of the gamete from the Hfr side are obvious. But it will be necessary to substantiate the single colony observations with single cell studies, from the former, however, I am quite well convinced of the complete integrity of the Hfr gametes. There are many other things that I would like to have an opportunity to discuss with you but time does not permit at the present instant.

Yours sincerely,

Joshua Lederberg

/mg

P.S. Your letter of November 29 has just now arrived. As I had indicated previously, the time for your visit would be much better to be from September to December, at least

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for our part. We are likely to be much better equipped from the point of view of our laboratory facilities at the later time. It is quite possible that we will not be on campus at least part of the summer and this would therefore make a prolonged visit past July on the earlier basis somewhat awkward. Needless to say, I am most delighted at this favorable development.

By this same mail I am complying with your request to forward a copy of each of our papers to Dr. Pomerat. We have received no bill for the reprints. Dr. Pomerat's concern about living accommodations for your wife and yourself are certainly due to a legal requirement imposed by current immigration laws, namely that visas may only be granted when there is assurance that the visitor will not unduly compete for housing facilities in regions where these are extremely limited. This is a ridiculous sort of situation but I will give Pomerat the necessary assurances. As to your stipend, I have indicated above, already, that we would be able to meet your needs as presently stated. Before I make too explicit a statement to The Rockefeller Foundation I hope you will tell me whether they will be able to contribute to your stipend while here as well as to your traveling expense; that is, just what is the basis of your application to them. If March to July next year turn out to be the only convenient times during which you will be able to make your visit it goes without saying, of course, that you will be more than welcome for that interval. I will inform the Rockefeller Foundation of my preference but also of this accommodation as well.

I am also enclosing a list of names with reference to the distribution of reprints of our Rome paper to European workers. Under the first heading I have the list of those workers to whom I am or have already undertaken to send this reprint and suggest that you do not overlap unnecessarily. Under the second heading I am including those names which I would anticipate that you will have already planned to send a copy of the paper or for whom I would make that request now. If you will make any comment that seems pertinent to you I will, of course, rely upon your advice. If there is anyone in this hemisphere to whom you would like to address this paper and who is not likely to be an automatic recipient on my own list, please let me know accordingly.

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Distribution of reprints of our Rome review on rewistance.

A) I will have sent copies to the following Europeans as part of a routine mailing:  
(and others outside US)

Andrewes-London	Dickinson -Nottingham
Gladstone-	Craigie London
Haddow	Burnet, Fazekas Australia
Boyd	Fulton London
Ashida (Tokyo)	
Browning (Glasgow)	
AndersOn-Spicer-Stocker-Felix London	
Beale Edinburgh	
Gard	
Weibull	
Fukumi	
Hauduroy	
Ihm -Freiburg	
Klein Stockholm	
Jude Paris	
Moewus (NY)	
Nachtsheim Berlin	
Rubbo (Melbourne, temporarily here working on acriflavine-induced mutation in yeast)	
Wolff Leiden	
Kikkawa Osaka	

B) I have with-held on the assumption that you will send to the following. If not, please let me know: In general, I have also withheld our JGM paper for the same reason and will leave it to your judgment about its distribution. \* have not had our Genetics paper either, and perhaps should from you.

Armitage London		Seppilli
..... Cambridge		Manon Utrecht
Haldane London		Abraham, Garrod- London
Gottschewski Wetzlar		
Grossowicz Jerusalem		Scanga
Lwoff et al Paris	Magni	Scardovi
Hinshelwood Oxford	Marquardt- Freiburg	Schlossberger Frankfurt
Dianzani * Genova	Martin, AV London	Scholtens Utrecht
Darlington* Oxford (sic)	Mather Birmingham	Schopfer Berne
Buzzati * where is now now - Medawar Pavia?"	Michaelis/////	Silvestri
Fleming... London he/	? Michaelis Voldagsen	Sirks Groningen, Holland
Frederiqq	Miles London	Williams-Smith Eng
Ephrussi *	Mitchison "	Steen Oslo
	Muntzing Land	Tomscik Basel
Hayes	McIlwain London	Tulasne Strasbourg
Harm Berlin	Oehlkers Freiburg	Vistonen Helsinki
Huxley??	Olitzki Jerusalem	Volcani Rehovoth
Kaplan Berlin	Piekarski Bonn	Welsch Liege
Kauffmann Copenh.	Pollock London	Westergaard Copenh
Kendall Oxford	Pontecorvo Glasgow	Yudkin
Knight BCJG	Pringsheim Gottingen	Kalmus
Kristensen Copenh.	Raettig Berlin	Pasternak-Gallia Lausanne
Latarjet Paris	Rowley London	Ivanovics Szeged
Lawrence—John Innes	Rountree Australia	Buonimini
Lewis ""	Sansome Ibadan, Nigeria	
L'Heritier Paris		
Maaloe Copenh.		