L. Ho

The University of Melbourne

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Bacteriology Department.
Carlton, N.3, 6th February 1957
VICTORIA, AUSTRALIA

Professor J. Lederberg,
Department of Genetics,
University of Wisconsin,
Madison 6,
Wisconsin, U.S.A.

Dear Josh,

Many thanks for your letter of January 11th. I shall now try to fill in some of the details for you and add further information as soon as my post-vacational tempo lessens.

Your planned arrival in Australia between June 5th and 7th and departure round about September 6th fits our schedule well. I ... enclose a copy of our lecture timetable 1957 in which you will see we have allocated to you two lectures a week over a period of eight weeks (16 lectures) commencing the week June 17th. This is only two lectures short of your proposed segment of 18 and there will be no difficulty in allocating the extra two. I would like you to take over the responsibility for all the microbial genetics lectures in our Microbiology course, and the first two should be devoted to a discussion and definition of terms. As you appreciate, we are using your presence in Australia to extend the course in microbial genetics beyond its normal length of 8-10 lectures and, depending upon the success of our proposed experiment this year, we will either maintain or reduce its content.

Last year the course of lectures in genetics covered the following topics:-

(1) Definition of terms. Genes, alleles, recombination, genotype, phenotype, etc.

(2) Evidence that biochemical and nutritional markers are gene controlled, largely illustrated by work with Neurospora.

(3) and (4) Techniques in microbial genetics, recombination, isolation of mutants, replica plating, penicillin selection, auxanographic methods, gradient plates, "etcetera etcetera."

(5) Recombination and fertility of crosses.

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(6) Transduction.

(7) Transformation.

(8) Cytoplasmic inheritance.

(9) Drug resistance.

(1_0) Revision.

Undoubtedly, you will cover this and more territory in your proposed segment of 16-18 lectures. It would be most helpful to have the topics and their sequence ready by March so that I could widely circulate these with a view of attracting graduates and postgraduates outside our Microbiology course to the lectures.

Your suggestion of giving an extra course of weekly lectures is most acceptable and if you could again give me some idea of topics and sequence I would try to organise this extra course for biologists on the Campus. I have no doubt it would be enthusiastically received.

With regard to Esther's obligations, I had in mind that she should organise and supervise the practical course in microbial genetics in collaboration with Bruce Holloway and Val James, our Senior Demonstrator. As soon as Val returns from her vacation I will send you the details of our present practical course and the time available for the new one under Esther's supervision. Esther will then be free to suggest any additions or modifications to this course to fit the time available. At present the following experiments are done:-

UV killing curve and isolation and characterization of nutritional auxotrophs.
Penicillin method of concentrating bacterial mutants.
Isolation of fermentation mutants of E. coli.
Isolation of petites.
Replica plating.
Recombination with K-12 using prototroph selection and S-R prototroph selection techniques.
Characterization of recombinants.
Sex compatibility in E. coli. Differentiation of F+ and F- strains.
Spread plating and replica plating isolation of drug resistant mutants.
Transduction motility in Salmonella.
Syntrophic growth.

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The only additions to our list would be experiments with protoplasts and the L cycle.

The other side of Esther's work will be in a research capacity working with Bruce Holloway, I hope on lysogeny in Pseudomonas. Bruce will be writing separately from Canberra (he joins us about March 1st), with more detailed plans of this collaborative work.

In regard to equipment for yourself, you can rest assured that that will be available. Mac Burnet has planned his movements so that he will have at least ten days with you before leaving for Geneva and 3-4 weeks with you prior to your departure. He was quite upset about the conflict of dates which arose as a result of the polio congress but has organised his travel so that you will be seeing him at the beginning and end of your stay.

I think this letter answers most of your immediate questions and as soon as you can let me have your lecture timetable I will get it in circulation.

One final matter re your visits, as previously planned, to other capitals: might I suggest that your points of contact for arrangement of accommodation and programme of meetings be as follows:-

Canberra - Professor Frank Fenner.

Sydney - Dr. W. R. Sobey,
Animal Genetics Section,
Zoology Laboratory,
C.S.I.R.O.,
University of Sydney.

Queensland - Mr. V. B. Skerman,
Bacteriology Department,
University of Queensland,
Herston Road,
Brisbane. Qld.

Adelaide - Miss Nancy Atkinson,
Reader-in-Charge,
Bacteriology Department,
University of Adelaide.

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and Dr. Nossal,
Biochemistry Department,
University of Adelaide.

Hoping you enjoy your brief visit to England and looking forward to seeing you later this year,

Yours sincerely,

SYDNEY D. RUBBO.
Professor of Bacteriology.