

SEP 17 1971

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DEPARTMENT OF MICROBIOLOGY

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September 15, 1971

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Dear Josh:

I am writing to inquire about the possibility of my coming to your lab this month to work on strain pedigrees again. I would like to set out next week for Denver, where I shall take Larry Morse's K12 strains off his hands and work out pedigrees for them while I am there. Then I would like to come to Palo Alto, say on September 27, if that is not inconvenient for you, to work with your strain records as I did before. I shall endeavor to explain below what I have in mind concerning the strain pedigrees.

The Coli Genetic Stock Center has evolved by now into a much larger operation than we initially had in mind. The NSF (i.e., Herman Lewis and the Genetics Society of America's Committee on the Maintenance of Genetic Stocks, which advises the NSF on these matters) now quite clearly regard us as being responsible for setting up a comprehensive collection of K12 stocks that will constitute the major central repository for research strains. At the insistence of Herman Lewis and the Committee members, the existence of the Stock Center is being announced this fall in *Nature*, *Science*, the *ASM News* and the *Microbial Genetics Bulletin*. This will undoubtedly lead very shortly to a great increase in the number of strain requests and means also that we should accelerate the process of taking in strains from other labs. The limiting factor here is the working out of pedigrees.

If one accepts the conclusion that it is worthwhile to assemble and maintain such a collection, then I think one has to conclude also that it is worthwhile working out strain pedigrees in order to keep track of the mutant alleles in the collection. This is what I am trying to do as we take strains in. Apparently, this is of some real value, as I get many requests concerning the ancestry of our strains and the feedback has indicated that people would like to see some of this information published, somewhere.

Herman Lewis has been very keen on our publishing a Stock List in some form or other. I have opposed this idea on the grounds that such a list, if it contained complete strain descriptions, would be too cumbersome to be of any use to anyone without our computer and/or record books. However, I think I have devised a format that would make such a list usable and we are now considering how to present it.

One possibility that is being considered is a supplement to the *Microbial Genetics Bulletin* devoted to the Stock Center which would be sent out to the MGB mailing list and printed in great excess so that copies could be obtained by others on request. This would contain, possibly, a Stock List, Pedigree Charts, Hfr and F' Maps (prepared by Brooks Low; showing points of origin and the extent of F's) and possibly miscellaneous gleanings such as lists of synonymous strain numbers, etc. The index to all of this would be something of an undertaking, too. It is possible that we would try to get this material assembled by next Spring.

Dr. Joshua Lederberg
Page 2

As far as the pedigrees are concerned: there is no point in presenting pedigree charts unless they are done much more carefully than these things have been done in the past. For example, I have finally worked out the derivation of HfrH (enclosed) and gotten Hayes' verification of it. It is a great deal more complicated than the version that is usually presented. I've also, I think, cleared up some of the confusion as to the derivation of CR34 (enclosed) which a number of people have inquired about. Appleyard has verified this.

Only recently I concluded that the strain that Ed Adelberg had always thought was the Hfr Cavalli (his AB257) is not, in fact, the Hfr Cavalli but is instead the Hfr type 3 isolated as a spontaneous mutant from "58-161" (W6) by Jacob and Wollman in their early papers. It was brought here by Pardee and was called strain 4000 and was described as being a "Cavalli-type" Hfr but carelessness somewhere along the line led to its being described as the Cavalli Hfr. The point of origin is apparently very similar, if not identical, but it should be given a different designation. I've written to Elie Wollman to see if he can verify this for me. So I shall have to track this through the various collections now and make corrections accordingly.

The supE mutation that keeps cropping up in various strains descended from Y10 was once demonstrated in Y10, I now know, and the question is when it first appeared. I am hoping to persuade someone to check on this in the laboratory.

If this sort of information is of general value then I guess it ought to be presented and I ought to continue gathering it. This means that I am pestering a great many people, including yourself, and it also means that I shall have to go to Paris soon because I can't figure out the Paris strains from reading the literature and I can't seem to get any information from the Paris lab by mail.

If something like the MGB supplement does come to pass, I would like to include pedigrees of some of the major lines of your Wisconsin strains. I think I got a number of them straightened out the last time I visited your lab. This time I want to check them carefully and also to put in references to the literature, where possible, for the various steps. Some of these are enclosed.

I gather that you would not want this material presented without your checking it, and yet this would require more time and effort than you would be likely to want to devote to the task. I don't quite see a way around this dilemma at the moment. Whether the pedigrees are 'published' or not, I shall have to continue constructing them in order to keep our allele numbers straight. But the assignment of allele numbers on the basis of pedigrees that I work out amounts, in a sense, to my publishing (or publicizing) the pedigrees. I would like to talk to you to see if we can sort out the responsibility for all of this to our mutual satisfaction.

Since I am writing on such short notice, I shall call you before leaving New Haven if I haven't heard from you by then. It would be very helpful to have access to your strain cards and book again. Also, if you have a list of your publications or a file of your reprints that would be very helpful, too. This is going to continue for some years, I'm afraid, as we are continually acquiring new strains and tracing them back to Wisconsin strains that we weren't concerned with before.

Dr. Joshua Lederberg
Page 3

I am certainly not averse to making an annual trip to Stanford. I hope that it is not too much of a bother to you.

Sincerely,

Barbara

Barbara J. Bachmann

bjb/mj