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Dr. S.I. Alikhanian
Institute of Genetics and Selection
of Industrial Microorganisms
Moscow 113545, USSR

Dear Dr. Alikhanian,

I was pleased to receive your letter of September 1st concerning the organization of the XIV International Genetic Congress to be held in Moscow in August 1978.

I am particularly grateful that you were thoughtful enough to ask for my suggestions about the particular symposium on "Genic Engineering", and I will certainly be happy to help you in any way that I can. While I can give you a few of the most obvious suggestions right away, I wonder if you could share with me your thoughts on the scope of the symposium to be sure that I give you advice that is really useful in relation to the specific plans.

While the current activity and excitement about recombinant DNA in bacteria certainly justifies giving this area the central position in any discussion of "genic engineering", I wonder if you had thought to make this the only focus or whether you had planned to include other forms of genetic manipulation involving higher plants and animals. Of course in a sense even controlled cross-breeding could be regarded as a kind of "genetic engineering", but I assume that this would be excluded from the scope of this particular symposium. On the other hand, such important findings as the fusion of plant with human cells, the introduction of cells of diverse genotype into the mouse embryo, the use of somatic cell fusion for plant crop development, and the increasingly important role of haploid plant selection and culture might all be regarded as very significant instances of genetic engineering. If you will let me know your thoughts about the overall scope of the program, I would be happy to comment again by return mail and perhaps suggest the names of some other possible candidate speakers.

Within the particular field of recombinant DNA research in bacteria I think you can get very effective suggestions by reading the issues of the Proceedings of the National Academy of Sciences, US, which contain an excellent sampling of the most important papers in this field. The names of Stanley Cohen and Paul Berg, both here at Stanford, are of course outstanding as is that of Herbert Boyer from the University of California, San Francisco. But perhaps you would also like to tell me approximately the size of the group of names that you would like me to send since I could furnish you with anything from 3 or 4 on the one hand to several dozen on the other, depending on what would

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be most appropriate.

I am assuming that you are more interested in the scientific content of work in this field than in the public policy problems - for example the issue of biohazard safeguards - and indeed I would recommend a specifically scientific orientation. However, if you feel otherwise, I could then also try to think of some other names that might be useful to bring into a discussion of the biohazard aspects of the problem. For the latter purpose - if you still wished to pursue it - I think you would want to get in touch with Dr. K. Birgel, Division of Communicable Diseases at the World Health Organization, Geneva, who has undertaken a particular responsibility for coordinating the different international steps being taken in this area. Dr. Solovieff from your country was also a member of the subcommittee of the Advisory Committee on Medical Research which met at WHO to discuss some of these problems last June. However, as I have indicated, while of course I am happy to give you whatever helpful advice I can in this direction, my own view is that it would be preferable to minimize the policy discussions and to put the main emphasis on scientific accomplishments in this particular area at least for the purposes of the Congress.

I know that your Institute is a leader in the practical applications of genetic research for the development of antibiotics and other industrial applications. I am sure for that reason that you would be interested to include this area in the Symposium. I am confident, or at least hopeful, ~~that there will~~ be some exciting things to report along the line of industrial exploitation of genetic engineering from this country by the time of the 1978 Symposium. Unfortunately, it is not possible to identify who will be ready to make such public discussions and the best that I can suggest is that you keep some time open for opportunities that become more visible within the months before the Symposium.

Professor Alikhanian, I of course recognize that you were among the leaders of Soviet genetics who were the first to understand the significance of my own work on recombination in bacteria and for that and many other reasons I am eager to have the opportunity to meet you in person as I plan to do at the Symposium. I can be hopeful that the Congress will be free from some of the extra-scientific restrictions that have attended other international congresses in recent years and which have then prevented them from fulfilling their function of encouraging informal exchanges among individual scientists without respect to political considerations.