[American Institute - "Blakeslee, Albert F."]

CARNEGIE INSTITUTION OF WASHINGTON
DEPARTMENT OF GENETICS
COLD SPRING HARBOR, LONG ISLAND, N. Y.

April 16, 1941

Mr. M. E. Gould
American Institute Science Laboratory
310 Fifth Avenue, New York City

My dear Mr. Gould:

We have gone over your letter of recent date regarding the science boys' projects with our staff. There is general sympathy with the scheme of these science clubs and the opportunity for these young fellows to do work largely on their own. There is a little feeling, however, that what some of the boys are planning to do would be making a research contribution of some value. This was shown especially in Lederberg's last sentence. We feel that it would be unwise to have the boys feel that they are actually carrying on original research work and contributing materially to the advancement of knowledge. Their work may contribute ultimately, however, by getting them familiar in this way with the experimental method at an early age. Along the same line it was felt that it might be unwise to emphasize unduly the practical importance of their experiments. In many of the projects I would suggest a less ambitious approach.

The only project that I feel competent myself in discussing is that on polyploidy by Paul Berg. This is a more complicated problem than the boy realizes and I doubt if he will be able to settle the problem for the farmer regarding any of his agricultural practices, as the boy seems to think.

I should suggest that he select a number of kinds of flowers in which he is interested and try doubling their chromosme numbers to see if thereby he will get larger flowers. He would then have something to show for his experiments which would be rather definite. The first generation would be a mixture of cells with normal and doubled chromosome number. For critical work he would have to depend on the second generation, and furthermore in the second generation a high proportion of the plants have an unbalanced number of chromosomes as excesses or deficiencies due to non-disjunction, or deficiencies due to lagging chromosomes induced by the colchicine. The unbalanced condition itself would produce an effect which would have to be separated from that due to the balanced chromosome number. To determine the exact balanced chromosome number means microscopical technique with investigation of meiotic divisions in pollen mother cells. This is not simple.

Some time if the boy cares to visit our Department I should be glad to explain some of the colchicine work to him, and would suggest a somewhat simpler problem.

I should think it might be better if you could get some

consultants who are already in the city for your boys.

If the boys should come down here some time Dr. Potter, who is carrying on cytological and histological work with mice, would be willing to give a little time to Gershowitz, Diefenbach, and perhaps to Lazarowitz; and Dr. Warmke would be willing to discuss Lederberg's problem with him.

Sincerely yours,

A. F. Blakeslee

Albert F. Blakeslee
Director

AFB:MM