

Braunschweig, Humboldtstr. 1.
21st December 1960

Heilmann

Dear Esther! Dear Joshua!

Barbara and I wish Merry Christmas and happy New Year to you. It is the first Christmas in your new atrium house and we hope it will have always good stars.

It is difficult to wish happiness because our feeling is overshadowed from Bobs death. We were corresponding together about the possibility to breed Rhizobia for high nitrogen fixation and large host range. My last letter has been opened by Mr. Brock from the C.S.I.R.O. in Canberra and he has informed me that Bob died in the 4th of November.

A fortnight ago I have visited the optical plant Zeiss in Oberkochen to prove the new Ultramicrospectrophotometer. With this wonderful apparatus it is possible to measure from ultraviolet till infrared with a ray from 0,3 μ diameter running in meander form or only in diameter. In bacterial stars I get the maximum absorption in 260m μ , the DNA maximum, and this maximum is situated in the star center, the point of zygote formation. My main work is now concentrated in increasing the recombination rate during star formation or to separate the generative phase from the vegetative one in my bacteria. I have some success and it is quite easy now to demonstrate recombination in B₆. Schuster and Schramm have demonstrated the inactivating or mutagenic effect of nitrous acid in TMV and Kaudewitz in E. coli caused by the deamination of the RNA or DNA - bases. I am trying to get mutants with this method in B₆ and it seems with good effectiveness. I hope to get now a broad mutant spectrum and to explain the mode of genetical exchange during star formation.

Dr. Kaudewitz visited me in October. He is now the successor of Dr. Nachtsheim in the Max Planck Institution in Berlin. Dr. Kaudewitz offered me a good position in his Institution but here I have now more scientific independence than in Berlin.

We plan to visit the microbial congress in Montreal 1962 and hope we can meet you there or in Stanford. But the realization of this plan depends from the money.

All best wishes from

Yours

Barbara, Irene, Heilmann and Welfried

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