

March 9, 1954

AIRMAIL

Dr. R. Y. Stanier  
Department of Bacteriology  
University of California  
Berkeley 4, California

Dear Roger:

I shall be disappointed if we do not in fact see you personally before this letter reaches its destination, but its primary purpose is to ask you to forward the enclosure to Dr. Cohen-Bazire who may or may not be working with you at the present instant.

I also want to take the opportunity to ask you if you know of any recorded research on bacterial chemotaxis. I have run into a rather striking example of negative chemotaxis on the part of *Salmonella* as against phenol. I am not sure I want to delve too deeply into this myself, but would like to know if the literature affords a definitive interpretation. It is difficult for me to see how a bacterium can orient itself in a concentration gradient by any means that would require a recognition of that gradient across the small dimensions of the bacterial cell. Alternative interpretations would require that the bacterium have some recollection, so to speak, of the phenol concentration of its previous and present environment. What would you make of this, Roger? If you can give me any literature references to work on negative or positive chemotaxis in bacteria I would be grateful to you. I am already acquainted with Clayton's works but do not see how this can be directly applicable.

Yours as ever,

Joshua Lederberg

JL/mg