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CAPE, R.

OCT 31 1978

Dr. Ronald Cape
Cetus Corporation
600 Bancroft Way
Berkeley, California 94710

Dear Ron:

You will recall that some time ago one point I did bring up with you, the idea of an essentially empirical search for compounds that would have anti-sickling activity. This could very well involve a variety of substances from natural sources, chemical random syntheses, or what I would focus on more specifically now: random hydrolysates of existing hemoglobins or mixtures of allogopeptide sequences produced synthetically and at least partly analogous to the hemoglobin molecules.

What provokes me to bring this question up again is a fascinating series of articles in the New England Journal of Medicine that began with the October 5th issue*. There are lots of prescriptions there for invitro assays for the kinds of activity that would be useful as well as an excellent definition of the physical-chemical parameters being sought. Beyond that, Tony Cerami's group here, potentially offers the best possible situation for clinical testing of material that had been successfully worked out up to that point.

One could, of course, think of using cloned biosynthetic peptide sequences, with randomization by mutation, especially in view of the fact that globin sequences have long since been spliced into prokaryotic DNA.

Yours sincerely,

Joshua Lederberg

* See especially 10/19