

2

October 12, 1959

Dr. Rob Roy McGregor
Director, Dow Corning Center for
Aid to Medical Research
Midland, Michigan

Dear Dr. McGregor:

I read with great interest the announcement in SCIENCE for September 25th, of the establishment of your center.

We have been spending a considerable amount of time on the application of silicones for fractionation, in density gradients, of various types of cells and particles. We have been using mixtures of silicone 510 and silicone 555 to achieve different densities. For one step in our procedure it is necessary for us to make reasonably stable emulsions of culture media containing cell suspensions in the non-aqueous phase. However, we have had some difficulty in using some of the usual emulsifying agents owing to their poor solubility in the silicones. For purposes of rigorous control of temperature it would be advantageous for us to be able to work at zero degrees centigrade, and this low temperature merely aggravates the solubility problem. Can you advise on suitable adjuvants to obtain emulsions of aqueous media in silicones? At the present time we are interested in gradients around $d=1.01$ and it may be that we have not made the most judicious choice of dispersing phase.

Your advice would be most welcome, as would be small samples of any recommended materials that you might send to expedite the early progress of our work.

Yours sincerely,

Joshua Lederberg
Professor of Genetics

McGregor, R. R.