Dec. 13, 1951

Dr. J. Lederberg
Department of Genetics
College of Agriculture
University of Wisconsin
Madison 6, Wisconsin

Dear Dr Lederberg:

Dr. C. P. Miller informed me that you might be interested in some experiments I have done on the effect of aeration on the growth of E. coli and its S^r mutant. I did only a few experiments on this aspect with results as given below:

Medium	Incubation	Number of cells per cc: E. coli	E. coli S^r
Nutrient broth	Anaerobic, 24 hrs	9.2×10^7	1.6×10^8
Glucose synthetic medium	Anaerobic, 20 hrs	7.2×10^8	6.7×10^8
Pyruvate synthetic medium	Anaerobic, 20 hrs	5.3×10^8	6.6×10^8
Nutrient broth	Aerobic, 14 hrs	4.5×10^9	3.2×10^9
Nutrient broth	Aerobic, 14 hrs	2.3×10^9	3.6×10^9
Nutrient broth	Aerobic, 22 hrs	2.8×10^9	2.5×10^9

It would appear from these experiments that aeration benefits the growth of the S^r mutant as well as of the normal coli.

Sincerely yours,
Ingrid L. Barkulis

3315 W Division
Chi 47