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Comparison of Glycerol and Trehalose as Nutrients for the Growth of Tubercle Bacilli.*

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Glycerol is recognized as the most valuable organic nutrient for the growth of tubercle bacilli. The studies of Anderson,¹ however, show that the lipins which make up a large part of the structure formed by these bacilli in the course of growth are not glycerides, but in considerable measure are esters of trehalose. It therefore seemed of interest to see if trehalose might function more effectively than glycerol in promoting growth. Trehalose for the experiment was furnished by Dr. Anderson.

Two lots of Long's² synthetic medium were made up, one containing 5% of glycerol and the other 5% of trehalose instead of

glycerol. Both lots were sterilized in the autoclave at 15 lb for 30 min. They were tested for reducing sugars after autoclaving and found negative. All flasks were inoculated with an equal amount of fresh tubercle bacillus culture (A-21), and incubated at 37.5°C for 58 days.

At the end of this time there was visibly less growth on the trehalose culture medium than on the glycerol medium. The total growth from each flask was filtered through tarred filter paper, air dried for several weeks, and weighed. The average dry weight of bacilli per 200 cc of the regular Long's medium containing glycerol was 1.580 g, and that from the same medium with trehalose substituted for glycerol was 0.985 g.

It thus does not appear that preformed trehalose has any advantages over glycerol as a constituent of the culture medium for tubercle bacilli.

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¹ Anderson, R. J., *Chem. Rev.*, 1941, **29**, 225.

² Long, E. R., and Seibert, F. B., *Am. Rev. Tuberc.*, 1926, **13**, 393.

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Effects of Intravenous Injections of L-Dopa upon Blood Pressure.*

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It has been reported by Bing and Zucker¹ that a rise in blood pressure is produced by the injection of l-dopa into the renal artery or directly into the renal parenchyma of cats after the kidneys of these animals have been made hypoxic by temporarily arresting the arterial blood supply. The rise in blood

pressure has been attributed to a disturbance in the amino acid metabolism in the kidney. Normally in this organ aromatic amino acids are first decarboxylated to form amines with pressor properties, and the latter are then deaminized. Under anaerobic conditions, although the decarboxylation is not affected, the deamination does not take place (Holtz *et al.*).² As a result in the chronic ischemic kidney the pressor amines enter the blood

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¹ Bing, R. J., and Zucker, M. B., *Am. J. Phys.*, 1941, **133**, P214.

² Holtz, P., Heise, C., and Luedtke, C., *Arch. Exp. Path. u. Pharm.*, 1938, **191**, 87.