infected material as the stomach contents of an aborted fetus. After two or three transfers, the bacilli grow quite readily even under ordinary aërobic conditions.

We have been using the method described by Huddleson, but have used in place of a CO_2 generator described by him, commercial CO_2 from a tank. This is because too much chlorine was given off with the gas from the Huddleson generator. We also used a serum agar media, the agar being made from lean beef and when used 10 per cent. of naturally sterile horse serum was added to the melted agar, cooled to 50° C., and the tubes are allowed to solidify in a slanting position. The reaction of the agar is adjusted to a P_H of 6.8 to 7.2, which is slightly more alkaline than heretofore recommended.

These culture tubes are heavily seeded with the material to be cultured, and are placed in a Whitall Tatum museum jar to which 10 per cent. CO_2 is added. The jar is then sealed and placed in an incubator at 37½° C. After 24 hours' incubation, small pin-point colonies will be observed, and after 48 hours' incubation, well-developed colonies of *Bact. abortus* will be noticed.

Huddleson makes the statement that CO_2 accelerates and favors the growth of *Bact. abortus*. We have been able to obtain the same results, using 10 per cent. hydrogen. It would therefore seem that the diminished oxygen tension rather than any specific effect of the CO_2, is involved. This last was suggested by Edwards in his review of the article by Huddleson.

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The effect of phenolsulphonephthalein upon the glomerular circulation in the frog.

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Further studies upon the function of the frog's glomeruli observed by the method of A. N. Richards[1] have shown that phenolsulphonephthalein is also excreted through the glomeruli. After

[1] Richards, A. N., *Am. J. Med. Sc.*, 1922, clxiii, 1.

the administration of phenolsulphonephthalein the glomerular capsule can be seen to be distended with pink fluid indicating that it is excreted through the glomerulus in an alkaline urine. Rowntree and Geraghty[1,2] have previously shown that phenolsulphonephthlaein is excreted through the tubules of the kidney but made no observations upon the excretion through the glomeruli. Under direct observation phenolsulphonephthalein can also be seen in the renal tubules, usually as a red dye indicating a deep alkalinity. The tissues immediately surrounding the renal capillaries are in some animals stained a diffuse red by the phenolsulphonephthalein and in some a light yellow, indicating that the tissues are sometimes alkaline and sometimes acid to phenolsulphonephthalein (sometimes more and sometimes less alkaline than $P_H - 7.2$) in spite of the fact that there was in all cases free and fairly rapid circulation visible through the capillaries. This indicates that the reaction of tissue cells may be on the acid side of neutral in spite of the fact that there is no actual asphyxia.

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A method for the volumetric study of the human hypophysis cerebri with illustrative results.

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The importance of the ductless glands in modern medicine has created a demand for more accurate data on these structures. Hammar of Upsala has particularly stressed this point. The need for quantitative facts is more urgent in the case of the hypophysis, or pituitary body, because this organ is composed of several parts which are more or less distinct structurally, functionally and embryologically; and because of the present tendency to classify pituitary disorders from the standpoint of hyper- or hyposecretion of each lobe, the time of onset with reference to

[1] Rowntree, L. G. and Geraghty, J. T., *J. Pharm. and Exper. Therap.*, 1910. i. 579.

[2] Rowntree, L. G. and Geraghty, J. T., *Arch. Int. Med.*, 1912, ix, 284.