to be most susceptible to the action of the sulfonamide drugs. No further conclusions as to the comparative susceptibility of the strains used in this study seems justified.

We are indebted to Squibb Institute for Medical Research for the sulfathiazole and to Winthrop Chemical Company for the sulfamethylthiazole used in these experiments.

We wish to thank Miss Eleanor M. Fleming for her technical assistance.

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Effect of Ether-Soluble Fraction of Bile on Hepatic Glycogen Storage.

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Mizuta and Ikegami[1] have reported the presence in cattle bile of an ether-soluble substance which promotes glycogen formation in the liver. We decided to repeat their experiments because the data presented are not convincing and the concept may possess significance.

Methods. We have conformed as closely as possible to the general experimental plan of the Japanese observers. Young adult rabbits were fed our standard stock diet for 2 weeks. They were then placed in a stock in a wire cage to prevent coprophagia and fasted for 72 hours. The animals were then given 2 or 4 g of glucose per kilo body weight slowly intravenously (10 minutes) and 30 minutes later were given the bile extract similarly. 2.5 hours later, the animals were given pentobarbital intravenously, which induces anesthesia immediately. The liver was frozen *in situ* with CO_2 within a minute. The frozen liver was crushed to powder and a weighed portion placed in 30% KOH, digested and analyzed for glycogen by Somogyi's method. The results were calculated and expressed as the percent of glycogen in the powder.

The extracts were made from freshly frozen cattle bile. One extract, A, was made by rendering the thawed bile slightly alkaline (pH 8.0), evaporating to dryness *in vacuo* at a low temperature for 24 hours, and extracting the powder with ether and removing the ether *in vacuo*. A second extract, B, was made by slightly acidifying the thawed bile (pH 4.0) with phosphoric acid, steam distilling for

[1] Mizuta, N., and Ikegami, Y., *Jap. J. Gastroenterol.*, 1937, **9**, 258.

6 hours, the distillate being extracted with ether and the ether removed *in vacuo*. A third extract, C, was made as in the first extract, A, except the thawed bile was slightly acidified (pH 4.0) with phosphoric acid.

That amount of extract equivalent to 6 cc of the fresh bile was injected slowly intravenously.

Results. The liver glycogen content of 10 control rabbits, which were fasted, treated with 2 g of glucose per kilo but were not given the bile extracts, averaged 1.37%, range 0.11 to 2.93%. The liver glycogen content of 5 rabbits which received bile extract A averaged 1.16%, range 0.29 to 1.78%; of 6 rabbits which received extract B averaged 1.22%, range 0.15 to 1.99%; of 10 rabbits which received extract C averaged 1.44%, range 0.13 to 2.03%. None of these differences are significant. The average liver glycogen of the 21 rabbits receiving the bile extracts was 1.31%, which compares very favorably with the average of 1.37% for the controls.

Using extract C on 11 rabbits which were given 4 g of glucose per kilo instead of 2 g, the average liver glycogen found was 2.01%, range 0.96 to 2.97%. The average liver glycogen of 8 control rabbits receiving the same amount of glucose was 3.0%, range 1.6 to 3.6%. This difference is statistically significant, indicating that the extract interfered with the deposition of glycogen; however, we doubt its physiologic significance. In 5 rabbits the ether extract of dried but otherwise unmodified cattle bile had no effect on glycogen deposition.

We were, therefore, unable to confirm the report that bile contains a substance which favors glycogen deposition in the liver.

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Effect of Inhalation of High Oxygen Concentrations, With and Without Carbon Dioxide, on the Electrocardiogram.

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In another communication[1] it was shown that the addition of 2 to 3% carbon dioxide to low oxygen mixture reversed the electrocardiographic changes of induced anoxemia in the majority of patients with

[1] Barach, A. L., and Steiner, A., to be published.