By this method the formation of cholic hydroxamic acid was shown to be dependent on the presence of ATP, CoA and fluorid. As hydroxylamine represents a trapping agent for CoA-activated carboxyl groups, it is concluded that cholyl-CoA represents the "activated cholic acid" which conjugates with taurine.

The ^{35}S-labelled taurine was generously supplied by L. Eldjarn, Norsk Hydro's Institute for Cancer Research, Oslo.

This work has been supported by *The Norwegian Cancer Society*, Oslo.

1. Bremer, J. *Acta Chem. Scand.* **9** (1955) *In press.*
2. Bremer, J. and Gloor, U. *Acta Chem. Scand.* **9** (1955) *In press.*
3. Eriksson, S. and Sjövall, J. *Acta Chem. Scand.* **8** (1954) 1099.

Observations on Biosynthesis of Lecithins

Donald J. Hanahan* and Martin Rodbell

University of Washington, Department of Biochemistry, Seattle, Washington, U.S.A.

Studies have been carried out on the metabolism of lecithin and certain of its derivatives in the subcellular fractions of the liver cell. Although lecithin was apparently not oxidized and had no obvious effect on the isolated mitochondria, lysolecithin, glyceryl phosphorylcholine, phosphorylcholine and glycorophosphate plus choline had a marked stimulatory effect on the oxidation rate of the mitochondrial systems. One of the most active compounds in this stimulatory action was phosphoryl choline which was very actively incorporated as an intact unit into lecithin. The implications of these observations and possible synthetic routes for lecithin will be discussed.

* Temporary address: Department of Physiological Chemistry, University of Lund, Lund, Sweden.

The Metabolism of Cysteamine Sulphinic Acid (Hypotaurine) in Rats, Investigated by Means of Radioactive Sulphur (^{35}S)

L. Eldjarn and A. Sverdrup*

Norsk Hydro's Institute for Cancer Research, The Norwegian Radium Hospital, Oslo, Norway

Cysteamine sulphinic acid is formed by the mammalian organism and is an intermediate in the degradation of cysteine [1]. The compound is formed by the decarboxylation of cysteine sulphinic acid [2] as well as by the oxidation of cysteamine and cystamine [3].

In order to study the metabolism of cysteamine sulphinic acid, the compound was synthesized and labeled with radioactive sulphur. ^{35}S-labeled cystamine was prepared as previously described [3]. Cysteamine sulphinic acid was prepared from cystamine according to the following dismutation reactions:

$$(HCl \cdot NH_2CH_2CH_2S)_2 + Hg^{++} \longrightarrow NH_2CH_2CH_2SOH + NH_2CH_2CH_2SHgCl$$

$$NH_2CH_2CH_2SOH \longrightarrow NH_2CH_2CH_2SO_2H + (NH_2CH_2CH_2S)_2$$

The mercaptide was precipitated by 10 % ethyl alcohol. When 8 equivalents of $HgSO_4$ was used, a yield of 23 % of cysteamine sulphinic acid admixed 9 % cystamine. was obtained. The cystamine was removed by adsorbtion on Dowex 50. The cysteamine sulphinic acid was crystallized from water-ethanol ether. M. p. 170° C.

One mg of ^{35}S-labeled cysteamine sulphinic acid was administered to male rats (250 g). After fractionation of the urine [3] the greater part of the radioactivity was recovered as sulphate and as taurine. Most probable the metabolism of cysteamine sulphinic acid in the rat organism is confined to these two reactions. Taurine is known not to be converted to sulphate by the rat organism. These findings should provide good opportunity to study the mechanism of sulphate formation in mammals by means of cysteamine sulphinic acid labeled with radioactive sulphur.

1. Awapara, J. *J. Biol. Chem.* **203** (1953) 183.
2. Bergeret, B. and Chatagner, F. *Biochem. et Biophys. Acta* **9** (1952) 141.
3. Eldjarn, L. *Scand. J. Clin. & Lab. Invest.* **6** (1954) Suppl. 13.

* Fellow of the "Norwegian Cancer Society", Oslo, Norway.