rat intestine as in those from the rabbit. The relatively low incorporation obtained in the rat with α-glycerophosphate might therefore be due to the more rapid splitting of this compound to inorganic phosphate and glycerol. The glycerol cannot then be used for glyceride synthesis[6]. α-Monostearin, when supplemented with adenosine triphosphate, coenzyme *A*, glutathione and magnesium chloride, stimulated the incorporation of labelled palmitate to about the same extent as in the rabbit.

A more detailed report of this work will be published elsewhere.

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Presence of Sialic Acid in Connective Tissues

Sialic acid was first demonstrated in the submaxillary gland by Blix[1] and afterwards in many secretions of higher animals—in liver, ovomucin, meconium, colostrum, erythrocytes, nervous tissue and micro-organisms. Comprehensive reviews on sialic acids have been published by Zilliken and Whitehouse[2] and by Blix[3].

The presence of sialic acid in connective tissue has not so far been reported.

In the course of our research on chemical composition of epiphyseal cartilage[4] and particularly on the mucopolysaccharidic components[5], the presence of this acid in epiphyseal cartilage of young rabbits was demonstrated[6]. We have extended this study to other tissues in order to see whether a polysaccharide containing sialic acid was present in the ground-substance of all connective tissues.

The tissues were hydrolysed with 0·1 *N* sulphuric acid at 80° C. for 1 hr.; the hydrolysate was filtered on a sintered glass filter and chromatographed on 'Dowex 2 × 8' by Svennerholm's method[7]; after elution with 1 *M* acetate buffer *p*H 4·6 the eluate was tested by the resorcinol reaction[7] and sialic acid was identified by the absorption spectrum of the chromatic reaction.

To identify and determine quantitatively the sialic acid, we used as standard compound N-acetylneuramic acid isolated from sheep submaxillary gland and kindly supplied to us by Prof. G. Blix.

The presence of sialic acid was demonstrated in the following tissues: epiphyseal cartilage of young pigs (1·6 mgm. per gm. fresh tissue), rib cartilage of young rabbits (0·6 mgm./gm.), bovine cornea (0·4 mgm./gm.), bovine aorta (0·6 mgm./gm.) and bovine dental pulp (0·6 mgm./gm.); smaller quantities are also present in bone and dentin.

From these results we may conclude that sialic acid is a diffuse constituent of the polysaccharidic fraction of ground substance in connective tissues.

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Configuration of Inositol Phosphate in Liver Phosphatidyl Inositol

The hydrolysis of synthetic glycerol 1-(inositol 2-phosphate)[1,2] has recently been compared with that of the glycerylphosphoryl inositol isolated from hydrolysates of liver phosphatidyl inositol[3]. The results suggest that the phosphate group in the original lipid is attached to the 1- or 2-hydroxyl of the *myo*inositol. Inositol 1-phosphate should be optically active, while inositol 2-phosphate should not.

Previous work[4,5] had suggested that the inositol monophosphate produced on hydrolysis of ground-nut or soya phosphoinositides was optically inactive. It was therefore concluded[6] that phosphatidyl inositol has the 2-phosphate structure. However, Pizer and Ballou[7] have now provided evidence that the inositol monophosphate from soya phosphoinositide has a small but definite optical activity ($[\alpha]^{25}_{589}$ + 3·4° for the *cyclo*hexylamine salt, −9·8° for the free acid). This called for a re-investigation of the earlier results.

One of the problems in determining the rotation of inositol monophosphate from soya lipids is that there are contaminating sugar phosphates which are strongly dextro-rotatory. A small amount of such an impurity could easily mask the low inositol monophosphate rotation. The soya inositol monophosphate, prepared as before[5], has therefore been purified by passage through three successive 'Dowex 1' columns, two using the formic acid–ammonium formate system and one using the sodium borate–ammonium formate system[3]. It was finally crystallized as a *cyclo*hexylamine salt and shown to be optically active. Since the rotation was quite small, determinations were made at several different wave-lengths. The activity increased considerably at lower wave-lengths. Molecular rotation was as follows: +12° (600 mμ), +18° (500 mμ), −32° (400 mμ), −54° (350 mμ), −89° (300 mμ). Calculations are based on the di*cyclo*hexylamine salt. Using a similar salt of inositol monophosphate produced by enzymic degradation of phytic acid and believed to be the 2-phosphate[5], values of zero (within the error of the instrument) were obtained at all the above wave-lengths. Soya inositol mono-