thymus and chick embryo DNA[5] in their immunochemical reactions. Comparison of the reported base composition of salmon sperm DNA[12] with those of calf thymus and chick embryo DNA[5] disclosed little difference.

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Serum Cholesterol Concentrations in Chicks

We were very interested in the article by De Somer *et al.*[1]. Their results are in good agreement with our earlier observation, where the influence of several antibiotics on the stability of fat emulsions was studied[2,3]. The emulsion was prepared by using a mixture of 3·0 ml. olive oil, 1·5 ml. 0·9 per cent NaCl and 1·5 ml. human duodenal juice; after 2 h of shaking the percentage of split ester bonds was estimated and the stability of emulsion was observed during the following 60 min. The addition of neomycin sulphate in concentrations (1 mg/ml., 10 mg/ml., 100 mg/ml.) corresponding to a dilution of a therapeutic dose in 10,000 and 1,000 ml. of digestive juice caused a significant decrease of lipolysis and prevented the formation of a stable emulsion. A similar effect was observed with some other antibiotics. In further experiments we observed that the addition of 30 mg neomycin sulphate to 1 ml. olive oil, administered intragastrically to rats, caused a decrease of alimentary lipaemia in the next 3 h (ref. 4).

The explanation presented by De Somer *et al.* seems very probable to us. The malabsorption syndrome following the administration of neomycin, however, cannot, in our opinion, be elucidated only by the effect of the antibiotic on the precipitation of bile acids and emulsification of fat; damage to the intestinal mucosa[5] and the deleterious effect on the intestinal flora should also be considered. The question arises, what will be the effect of neomycin and its derivatives on lipolysis, especially in other than biphasic systems?

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We agree with Dr. Krondl that the malabsorption syndrome following the administration of neomycin cannot be explained by precipitation of bile acids in the gut, and that disturbances in the intestinal flora, toxic effects on the mucosa and inhibition of lipase activity may play a part.

Our studies, however, were not performed in order to find an explanation for the malabsorption syndrome during neomycin therapy. The *N*-methylated derivative of neomycin described by us has lost its antibiotic properties and does not cause a malabsorption syndrome in patients taking the drug for more than 12 months at a dosage of 6 g a day. Nevertheless the compound is still an active hypocholesterolaemic agent and this effect seems to be due to an action on bile acid micelles in the gut.

We also tested the influence of neomycin, *N*-methylated neomycin and streptomycin on porcine pancreatic lipase with β-naphthyl stearate as a substrate in the presence of taurodeoxycholate above the critical micellar concentration (De Laey, unpublished results). In complete agreement with the studies of Krondl *et al.* we find a significant (22–48 per cent) inhibition of the lipolytic activity after addition of neomycin or *N*-methylated neomycin to the test system. However, this inhibition of lipase activity seems also to be due to an effect on the bile acid micelles because no inhibition of the residual lipolytic activity was observed when bile acids were omitted from the test system or when taurodeoxycholate was present at submicellar concentrations (0·05–0·8 mM). Furthermore, streptomycin, having only mild bile acid precipitating activity, was also significantly less active in inhibiting porcine lipase activity.

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Hexosamine in *Bombyx mori* Silk

Constituents other than protein in *Bombyx mori* silk have received little attention[1]. The significant amounts of hexosamine found in hair and wool[2] prompted this study to quantitate and to identify the amino-sugars in *B. mori* silk.

Raw silk was obtained from Gerli and Co., Inc., Park Ave., New York, and ground in a Wiley mill. For dry weight determinations, aliquots were dried in a vacuum drying apparatus over boiling toluene with P_2O_5 as a desiccant. The ground silk was hydrolysed with twenty times its weight of 4 N HCl in sealed tubes overnight at 104° C. The hydrolysates were dried and purified on Dowex 50 × 8 cation exchange resin using 1 × 5 cm columns after the method of Boas[3] and 1 × 45 cm columns after the method of Gardell[4]. Hexosamine was quantitated with the Elson-Morgan reaction[3] using glucosamine standards. The amino-sugars were identified by chromatography of the ninhydrin degradation products from peaks derived from the long columns[5].

Two Elson-Morgan reactive peaks were obtained from the Gardell columns and these were degraded with ninhydrin to arabinose and lyxose respectively. The total amounts of hexosamine derived from both the Boas and Gardell methods agreed quite well, 1·52 and 1·47 μM/100 mg dry weight silk respectively of which slightly more than half (56 per cent—see Table 1) was glucosamine.

B. mori silk has significant quantities of the hexosamines, glucosamine and galactosamine present in nearly equivalent amounts.

Table 1. Hexosamine in *B. mori* Silk

μM/100 mg dry weight			
Boas method	Gardell method		
Total	Glucosamine	Galactosamine	Total
1·52	0·82	0·65	1·47