the de Toni–Fanconi syndrome[15]. The opposite defect, normal acid excretion but impaired ammonia secretion, has been reported to occur in another renal disease of children with organic aciduria, hydrophthalmos, mental retardation and symptomatic rickets[16].

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Catalase Production by Lactobacilli

Lactobacilli are considered to be catalase-negative[1], or occasionally to produce very small amounts of catalase[2]. The lactobacilli isolated from dairy products have always been found to be catalase-negative[3,4]. During recent work on the microflora of Cheddar cheese, we have encountered strains of lactobacilli which possess both strong and weak catalase activity. Three strains of *Lactobacillus plantarum*, originally isolated by Sherwood[3] from New Zealand Cheddar cheese, were found to be catalase-positive. Two of the strains gave strong catalase reactions whereas the other strain was much weaker (see Table 1). Serological[5] and physiological[6] tests have shown that these latter organisms are typical strains of *L. plantarum*.

Production of catalase was detected by streaking the cultures on to the following agar media: (1) tomato juice, dextrose of Briggs[7]; (2) lactose, yeast, phosphate of Hunter[8]; and (3) yeast, tryptone, glucose of Felton, Evans and Niven[9]. The plates were incubated anaerobically at 30° for two or three days, and then either flooded with 5 ml. of a 3 per cent hydrogen peroxide solution (10 vol.) or the growth was washed off with 0·5 ml. of sterile distilled water and 0·5 ml. peroxide added, and then observed for the appearance of oxygen evolution. The effect of composition of the medium upon the production of catalase by the three strains of *L. plantarum* is shown in Table 1.

Table 1. Catalase Production by Lactobacilli on Different Media

Strain No.	Medium 1 (2 per cent glucose)	Medium 2 (2 per cent lactose)	Medium 2 (0·5 per cent glucose)	Medium 3 (0·05 per cent glucose)
1·1 3·1 4·3	++ − +	++ − ++	+++ + +++	+++ + +++
Control plates (uninoculated)	−	−	−	−
Staph. aureus A 227				++++

Catalase production was much increased when the strains were grown on a medium with a low glucose content, as Felton, Evans and Niven[9] found also with the *Pediococci*.

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Staining Properties of the Golgi Zone of the Shell Gland of the Dogfish

During research on the histochemistry of the shell gland of the dogfish, *Scyliorhinus caniculus*, some interesting reactions of the Golgi zone of the secretory cells have been observed.

In such material prepared according to Aoyama's silver technique, an oval or horse-shoe-shaped structure, either solid or with an argentophil exterior and an argentophobe interior, was visible in the Golgi zone (Fig. 1). In sections fixed in Regaud's fluid and afterwards postchromed, the secretory granules stained intensely with Heidenhain's hæmatoxylin, and an unstained circular or horse-shoe-shaped area was present in the Golgi zone above the nucleus (Fig. 2). Sections prepared in a similar manner and stained with sudan black showed a well-marked but diffuse zone without structural detail (Fig. 3).

In sections of the gland fixed in Bouin's fluid and stained with aniline blue (dilute, in 90 per cent alcohol) two diverse results were obtained. In some of the secretory cells a number of solid blue granules, in size and appearance similar to the secretory granules contained within these cells, were localized in the Golgi region (Fig. 4). In other instances, however, such localized granules were absent, and in their place a diffuse zone similar to that shown by sudan black was clearly visible.

Finally, it was observed that gland tissue fixed in 70 per cent alcohol and afterwards stained with aniline blue in 90 per cent alcohol, after treatment with catechol[2], also demonstrated the presence of a