

Editorial

It is difficult to start an editorial without saying ‘in this issue we have the usual broad range of topics’! The editors have, from time to time, been asked to consider a series of reviews with a common theme for a particular issue. However, unlike the proceedings of a conference, we cannot ensure that several reviews will be ready at the same time. On the other hand, unlike a multi-authored book, we cannot postpone publication until all the chapters are ready. In any case, an issue on a theme would leave many readers disappointed if they were not especially interested in the areas of nutrition covered under the theme.

So, in this issue we have the usual broad range of topics covering public health nutrition, farm animals, gut health, vitamins, minerals and methodology; something for everyone, I hope. The authors are based in Japan, the Netherlands, South Africa, UK and USA.

HIV can be transmitted by breast-feeding and, according to Coutsooudis (2001), is increased by the duration of breast-feeding. However, HIV risks do not, in many situations, mandate a switch to bottle-feeding given the costs and health risks inherent in the latter. The evidence suggests that the risk of HIV transmission is not increased by exclusive breast-feeding in the first 6 months and it might be better not to provide mixed feeding up to that point, but terminate breast-feeding soon after that age.

The inclusion of antibiotics in the diet of some classes of farm animal has received wide publicity in recent years and we recently published a review on this subject (Barton, 2000). In this issue Williams *et al.* (2001) describe and discuss some dietary alternatives to antibiotics for ensuring the health of the hind gut and contributing to the health of the animal. In particular they discuss the role of the microflora in fermentation and in the production of short-chain fatty acids.

In a parallel review, Johnson (2001) provides evidence for links between cell division and death in the intestine, and the protective effects of butyrate (one of the major short-chain fatty acids) and several other substrates in digesta, including polyunsaturated fatty acids, flavonoids and some glucosinolate metabolites. He describes likely mechanisms for these effects and their significance for human health.

Vitamin B₆ is well-known as a cofactor for many enzymes. It has recently been shown, however, that its role as a modulator of steroid hormone receptor-mediated gene expression, and the expression of other genes such as that for albumin, is also of great significance. Oka (2001) reviews the mechanisms of these actions, insofar as they have so far been unravelled.

The importance of dietary folate around conception has been appreciated for several decades; its effect in reducing plasma levels of homocysteine is a more recent discovery, however, but particularly important in view of the increased risk of cardiovascular disease in patients with high homocysteine concentrations. Brouwer *et al.* (2001) discuss the whole area of folate availability with particular respect to decreasing homocysteine concentrations. An important point is that an intake of 0.5 mg folic acid/d has the maximum effect on homocysteine and the effects of higher doses of folate are unclear.

Dainty (2001) uses four minerals (Ca, Zn, Cu, Se) as examples of the use of compartmental modelling with stable isotopes to improve knowledge of mineral requirements. For each example, he gives background and some examples of relevant studies, including diagrams of the compartments included in the models. The author highlights gaps in our knowledge and suggests studies to fill those gaps in knowledge and understanding.

From time to time we invite reviews of a technical or methodological nature. In this issue we have a description of a very sensitive method for measuring nuclides useful as tracers of nutrition and metabolism (Jackson *et al.* 2001). While bulky and expensive, the equipment is becoming more 'user-friendly' and is available in several countries. The advantages over traditional tracer methods include: the isotopes to be measured need not be radioactive; in many cases a single dose of marker can be traced for many years; very small samples are required. The authors proceed to illustrate their description of the methodology with examples including Ca metabolism, Al uptake, intake of carcinogens, fat metabolism and folate metabolism.

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