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Editorial

Our last link with the founding of *Nutrition Research Reviews*, in 1988, is being broken by the retirement of Professor Joe Millward from the Editorial Board. For 13 years he has been a mainstay of the success of the journal, both by his hard work in recruiting authors and seeing their contributions through to publication, and the breadth of knowledge and interest he brought to editors' meetings. His voluminous output of publications on mainly protein-related subjects covering man and a range of other species has included reviews in consecutive volumes of *NRR* (Millward, 1995; Millward & Roberts, 1996). Joe's presence on the Board will be sorely missed, but it is with great pleasure that we welcome to the Editorial Board Dr Jean Grizard of the Human Nutrition Research Centre, INRA, France. Not only is he a worthy successor to Joe Millward, but also our first full board member from outside the UK. He has also contributed to *NRR* as an author (Grizard *et al*. 1995).

While on the subject of the international aspects of *NRR*, although published on behalf of the Nutrition Society (of the UK and the Republic of Ireland) it has had the great benefit for several years of the advice of international editorial advisors who, together with the UK-based advisors, support the Board in inviting world experts to contribute to the journal.

The seven reviews in this issue cover the usual wide range of topics and are contributed by authors from Australia, Republic of Ireland, UK and USA.

In industrialized Western societies, about 20–30 % of the adult population have some degree of elevation of blood pressure, and this is a major predisposing factor for illness and death. The widespread use of hypotensive drugs, while reducing the problem, is tackling the symptoms rather than the causes. Of the many contributory factors, Dakshinamurti & Dakshinamurti (2001) identify several micronutrients, of which vitamin D and its metabolites, and vitamins C and E, are singled out as of particular importance. In addition, several minerals are shown to have beneficial effects, while others are undoubtedly harmful to the maintenance of normal blood pressure.

Zempleni & Mock (2001) describe recent research into the control of biotin metabolism and show that the mononuclear cell in blood transports biotin in a specific manner, the molecular biology of which is well on the way to being understood. There is, for example, a suggestion that biotin might play a role in the transcription and replication of DNA, and that its uptake into cells is regulated in order to allow it to have these functions.

Cannabis and related substances are the subject of Kirkham & Williams (2001) review and specifically their effects on food intake. The recent discovery of cannabinoid receptors in the brain has contributed to the explanation of how these substances, whether exogenous or endogenous, have their effects on appetite. This is a topical subject in view of the debate over legalisation of cannabis, especially as a pain reliever and an appetite stimulant for the very ill.

'Nutrition in the space station era'! A dramatic title for the Stein (2001) review, but one well justified by its content. The more obvious nutritional aspects of space flight are the weightlessness and lack of exercise; both bone and muscle mass are reduced, leaving astronauts weak when they have to contend once again with gravity. However, the most serious problem turns out to be the low intakes of food, astronauts persuaded to eat normal amounts felt uncomfortable and, for the time-being, the inadequate intakes are being tolerated as flights of no more than a few months are undertaken. These problems will have to be resolved before space flights of several years are attempted.

Kun *et al*. (2001) show how an adequate intake of Ca by children and adolescents might reduce the severity and incidence of osteoporosis later in life. Milk is an excellent source of Ca and the cessation of school milk programmes in some countries in recent decades is likely to increase the risk of osteoporosis. Exercise is also good for bone health and it is recommended that supplementary milk and encouragement to exercise be adopted (or re-adopted), even though the evidence for long-term benefit is not strong.

Finally, we have consecutive reviews on two aspects of conjugated linoleic acid (CLA). That of Lawson *et al*. (2001) describes the synthesis of CLA in the rumen of the cow and makes the point that cow's milk is a very good source of CLA. Also highlighted is the fact that plant oils are high in linoleic and linolenic acids, which are precursors for CLA, providing a means to increase the CLA content of milk. The CLA content of milk increases when cows are at pasture, giving a significant seasonal cycle.

In the second paper on CLA, Roche *et al*. (2001) demonstrate that in animal models dietary CLA has anti-adipogenic properties, improves plasma cholesterol metabolism and inhibits atherogenesis. Again in animals, CLA improves immunological responses and there is some evidence of this in man also. The authors speculate on possible modes of action and pose the challenge to improve our knowledge of the nature and basis of health effects of CLA.

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References

Dakshinamurti K & Dakshinamurti S (2001) Blood pressure regulation and micronutrients. *Nutrition Research Reviews* **14**, 3–43.

Grizard J, Dardevet D, Papet I, Mosoni L, Patureau Mirand P, Attaix D, Tauveron I, Bonin D & Arnal M (1995) Nutrient regulation of skeletal muscle protein metabolism in animals. The involvement of hormones and substrates. *Nutrition Research Reviews* **8**, 67–91.

Kirkham TC & Williams CM (2001) Endogenous cannabinoids and appetite. *Nutrition Research Reviews* **14**, 65–86.

Kun Z, Greenfield H, Xueqin D & Fraser DR (2001) Improvement of bone health in childhood and adolescence. *Nutrition Research Reviews* **14**, 119–151.

Lawson RE, Moss AR & Givens DI (2001) The role of dairy products in supplying conjugated linoleic acid to man's diet: a review. *Nutrition Research Reviews* **14**, 153–172.

Millward DJ (1995) A protein-stat mechanism for the regulation of the lean body mass. *Nutrition Research Reviews* **8**, 93–120.

Millward DJ & Roberts SB (1996) Protein requirements of older individuals. *Nutrition Research Reviews* **9**, 67–87.

Roche HM, Noone E, Nugent A & Gibney MJ (2001) Conjugated linoleic acid: a novel therapeutic nutrient? *Nutrition Research Reviews* **14**, 173–187.

Stein TP (2001) Nutrition in the space station era. *Nutrition Research Reviews* **14**, 87–117.

Zempleni J & Mock DM (2001) Biotin homeostasis during the cell cycle. *Nutrition Research Reviews* **14**, 45–63.