

## EDITORIAL

With volume 10, *Nutrition Research Reviews* has reached a significant milestone in its career: it is the first issue under our new publisher, CAB INTERNATIONAL, and the last to be published as a single issue per year. In 1998 we will publish volume 11 as two issues: 11(i) in mid-year and 11(ii) at the year's end. In due course the publication dates are likely to become spring and autumn. At this stage it is difficult to be precise about the size of these issues but about eight papers per issue are planned or sixteen per volume. This compares with about 12 per volume hitherto. This schedule will give us more flexibility. Papers that, for whatever reason, do not make it into their allotted issue have hitherto faced a whole year's delay to publication. A delay of six months, while regrettable, is a good deal more tolerable.

Reaching such a milestone provides the editor with the opportunity to take stock of NRR, its progress and aspirations and inform readers about future developments. I like to think that Roy Smith's dream of a reviews journal that would span the whole of nutrition science, providing concise, scholarly assessments that will be useful and interesting to research workers, teachers and generalists alike, has been sustained.

One of my own aspirations has been to develop the international credentials of the journal in all respects: authorship, readership and subject areas. This is being achieved gradually in a number of ways. Our international editors, currently in USA, Guatemala, Sweden, Japan and Australia, assist enormously by providing more widely ranging suggestions for topics and authors than the UK editorial team could ever hope to do on its own. They can also act as focal points for information and awareness about the journal in their own areas of the world. CAB International, with its branches and research connexions worldwide, is also keen to emphasize the journal's international nature and to promote it vigorously wherever nutrition research and teaching are practised. Without wishing to underrate nutrition research in other countries, the publisher and I are particularly keen to increase awareness of the journal in the United States of America. Not only is that where a majority of nutrition research publications originate but I am informed by my American friends that there can be great confusion (in name at least) with *Nutrition Research* (an original publications journal) and *Nutrition Reviews* (an excellent reviews journal to be sure but with a very different style and intent). I fervently hope that our American colleagues will recognize that *NRR* has a distinct contribution to make to the dissemination of information about nutrition science alongside these other publications. Certainly it is gratifying that there is a steady contribution to *NRR* articles by American authors and this is set to increase further over the next few years.

As I am frequently asked how reviews in *NRR* originate, this is a good opportunity to make our policy clear. Our first priority is to commission reviews which are suggested by our international editorial team and discussed in detail at twice yearly editorial meetings and by correspondence (increasingly by e-mail). UK editors each have responsibility for a proportion of commissioned reviews, as far as possible close to their own area of expertise. They carry the responsibility of corresponding with their authors. Each review received by us is read by the editor and at least one independent referee. In cases where editors themselves submit reviews, we like to get opinions from two referees and another editor to minimize potential criticisms that editors find *NRR* an easy route to publication. Having carefully chosen our authors, it would be unexpected to receive a referee's report advising us not to accept the review, although this can happen. The referee's main task is to assess whether the review is balanced and objective (in general, we are not seeking a summary of the authors' own work). Referees also

give advice on whether key areas have been omitted and whether the work is sufficiently critical rather than being simply a catalogue of findings. It is usual, therefore, for us to accept commissioned reviews but to request minor, occasionally major, revisions.

A different situation exists regarding unsolicited reviews. The early issues of the journal contained mainly, if not entirely, commissioned reviews. As the journal became more widely read and well known, it was gratifying to find that authors wanted to write for us and I now receive many letters from potential authors asking me to consider their work for publication. Such requests may be discussed at our twice yearly editors meetings, or more often by consultation between editors. Some may be immediately unacceptable because of unsuitability of subject matter (e.g. they contain insufficient material of nutritional interest) or for reasons of poor quality. Most, however are sent to a referee who now plays a more positive and important role to ensure consistency of quality. Currently, the proportion of commissioned to non-commissioned reviews is about 2:1.

Another key player in our search for quality is our copy editor, Brian Bone, who has worked with the journal since its inception. If there are authors reading this editorial who have been at all irritated to receive a letter from Brian with a list of detailed queries when they had already been through a process of revision in response to an editor's report, please read on! Brian has the responsibility to ensure a degree of consistency in our publications. We do not seek to interfere unduly with an author's individual writing style but we are concerned that certain house rules regarding format and style of all Nutrition Society journals are followed. Through long experience, Brian has an eye for the long contorted sentence (from which none of us is immune) and the skill to redraft in simpler clearer English. I scrutinize the copy-edited typescripts to satisfy myself that the editor has not changed the author's scientific meaning and I refer back to the author when necessary. Most importantly, Brian has set high standards regarding the accuracy of citations and I know of few typescripts received by us in the history of *NRR* that did not have at least one incorrect reference. Usually several references are at fault and not infrequently, dozens. If there were a single step that authors could take to ensure a smoother passage of their papers through the system, it would be stricter discipline with regard to referencing.

Volume 10 contains fewer papers than normal: several commissioned papers were not received on time; others were unacceptable in their original form and revisions were not received. Nevertheless I hope readers will agree that the quality and varied interest of these papers make this an outstanding issue.

In her paper 'Vitamin requirements for term infants', *Powers* aims to provide the informed health professional with an up-to-date evaluation of current thinking. There is a clear practical purpose behind this scholarly review. The author questions whether current criteria for vitamin adequacy in the neonate are sufficient and makes a plea for the development of new biochemical, physiological or clinical markers of well defined specific functions. She also questions the justification for the commonly made assumption that breast milk composition should necessarily be regarded as some kind of 'gold standard'. Breast milk is certainly not constant in composition and may be influenced by many environmental and endogenous factors. The reader might like to read this chapter in conjunction with *Heinig and Dewey's* review of "The health advantages of breast feeding for infants" in volume 9 of *NRR*.

The latter two authors have now provided a logical sequel to their volume 9 article entitled 'Health effects of breast feeding for mothers'. They discuss the influence that breast feeding has on the mother's glucose and lipid metabolism, on fertility and on (reduced) risk of various cancers. Although bone mineralization declines during lactation, breast feeding does not appear to cause long term depletion of bone tissue nor increase the risk of developing osteoporosis. A

major criticism of many published studies is that mothers have often been identified as 'breast feeding' when in reality they breast fed for a very short period only. A lengthy lactation may be required for optimum effects on the health of both mothers and infants.

Among the many advantages of breast feeding for the mother, Heinig and Dewey identified a significant association between lactation and weight loss in most but not all studies, although there was no evidence that lactation prevents obesity. The theme of motherhood and weight maintenance is put into sharper focus by *Harris and Ellison*, who ask the question "Do the changes in energy balance that occur during pregnancy predispose parous women to obesity?" The many cross-sectional studies on the subject have been unsatisfactory in that they were unable to control for a whole host of social and behavioural confounding factors, whereas longitudinal studies avoid these problems by using each mother as her own control. All but about three suffered from either not obtaining accurate measurements of prepregnant body weight, not allowing sufficient time to lose weight retained after delivery and not allowing for natural weight gains over time. In the best controlled and designed studies, a modest weight gain of up to about three kg on average was noted but, as the authors point out, averages conceal the fact that some mothers experience a substantial weight gain during this period and become obese. The causes of the obesity in these individual cases deserve closer examination.

I hope that a cursory glance at the paper by *Givens and colleagues* will not lure the reader into assuming that this is only for those interested in animal feeds evaluation. Many readers will perhaps not have heard of NIRS (near infrared spectroscopy) let alone have been aware of its potential as a tool in nutritional analysis. Whereas most applications have so far been for animal feeds, where NIRS increasingly provides a rapid and accurate method for prediction of nutritive value, the authors make it clear that there is enormous potential for human foods too. The authors cite applications for the detection of water, protein, fat, sucrose and starch contents of foods and drinks, for tracking the progress of bread staling or protein denaturation during cooking. There are prospects for applications to the authentication of foods and to the enforcement of related legislation. Of particular value in today's climate of opinion is its minimal environmental impact.

In previous issues of *NRR*, much attention has been given to reviewing blood lipid profiles in relation to vascular diseases. Atherosclerosis is only one part of the coronary heart disease story and it is refreshing to read the review by *Vorster and colleagues* which focuses on the haemostatic system, recognizing that diet may play a critical role in the thrombotic phase of coronary heart disease. The authors' clear description of the components of the haemostatic system and how they interrelate, as a basis for later discussion of the effects of diet upon them, will be of great benefit to those who, like the editor, find these processes confusing in their complexity. Whereas fats have clearly received the lion's share of research in this area, the authors have provided useful insights into effects of other dietary components. Despite its enormous importance, this remains a relatively poorly researched area and the authors inevitably conclude that more research on specific dietary effects is needed before advice can be given to the public for prevention of cardiovascular disease.

*Rosado* is a leading international expert on lactose digestion and maldigestion. His review will be welcome to many who have been confused about distinctions between lactase deficiency, lactase non-persistence, lactose maldigestion, lactose intolerance, and milk intolerance. The distinctions are crucial and misunderstandings of them by otherwise knowledgeable and influential people have led to some erroneous views about the use of ruminant milks as foods in many parts of the world. Dr Rosado has given us a masterly explanation of these terms and a clear account of the influence of lactase non-persistence on milk consumption. He concludes that severe lactose intolerance may have been overemphasized because of the unrealistically

high loads of lactose or milk often used to assess its prevalence and that there is no scientific evidence to support the reduction or elimination of milk intake in populations in developing countries owing to lactose maldigestion or lactose intolerance.

The final paper of this issue differs from most other reviews that we have published to date. The authors, *Raubenheimer and Simpson*, address the important question of how animals satisfy their complex needs for nutrients when the foods that are available to them differ so widely in their nutritional profiles. No one food is likely to supply just the nutrient profile that the animal requires: some foods supply a certain nutrient in excess, others may be deficient in it. How do animals balance up their needs under such circumstances? These authors describe how they have built up integrative models of nutrient balancing as applied to a range of insects and vertebrates. These models provide a framework for designing and interpreting experiments on the regulatory and metabolic mechanisms underlying nutritional homeostasis. This review provides a lovely example of how nutrition science can progress with the help of mathematical modelling as a basis for further experimental work.

Happy reading!