Outlook

P. Schreier (above) and H.-U. Humpf (left)

Molecular nutrition research – a multidisciplinary challenge

In an industrial society in which on the one hand the quality of industrially produced foods is considered to be as high as never before, but on the other hand excess intake of calories and a sedentary lifestyle are common, essential opportunities for nutritional research have arisen. Among a number of tasks awaiting the multidisciplinary work of food chemists, nutritionists, and medical scientists, two major trends can be currently recognized, *i.e.* to investigate the role of nutrition in (i) disease prevention and (ii) the optimization of health at all life stages. In both areas, the main difficulty is that changes in body functions caused by nutrition are mostly mild and thus difficult to detect. Although small, these effects might be essential in determining the risk of chronic disease. Thus, in nutritional research, much effort is and must continue to be devoted to further characterizing diet-health relationships.

The health status is regarded to be a result of the interaction between the environment (with diet playing the major role) and the organism (with its genom), but collecting reliable information on these relationships still represents a particular challenge. Several major themes are currently being studied, including:

(i) the molecular mechanisms of the effects of nutrition, covering different levels from cells, through organs to the whole organism;

(ii) investigations to characterize 'health' (`pre-disease') and 'disease' on a molecular basis in relation to nutrition; of course, psychosocial effects should not be neglected although their description represents an additional challenge;

(iii) inclusion of diet in genomic research, *i.e.* nutrigenomic studies to identify the mechanisms controlling nutritional processes, and

(iv) linking nutrition to the field of analytical-technical development, *i. e.* from various physicochemical areas (including imaging) through to bioinformatics.

For all these areas *Molecular Nutrition & Food Research* provides a suitable platform that is – as confirmed by its development over recent years – widely accepted by the scientific community. The increase in the impact factor to 3.439 provides great encouragement to further promote molecular nutrition which, despite a number of significant advances, is still in its infancy. Through promotion of the journal it is hoped that those questions regarding molecular nutrition posed by consumers, industry and the responsible persons in public health will be answered for the benefit of society.

"it is hoped that those questions regarding molecular nutrition posed by consumers, industry and the responsible persons in public health will be answered for the benefit of society"

In 2009, we will continue to integrate special issues on top themes into the current program, beginning with this issue devoted to Neuzil's guest review work on mitocans. Further special issues this year will include 'diet and prostate cancer, 'mycotoxins', ,bioactivity of apple constituents', and 'nutrition and neuromodulation'.

In 2008, on-line only supplement issues were introduced to accelerate publication and provide increased flexibility with regard to the length of papers. We plan to proceed with this strategy and further encourage our authors to publish extensive material, *e.g.* long tables, as supporting information which is published online only and is available free of charge to all users. Nevertheless it will be necessary to introduce page charges in 2009 which will apply to research articles exceeding seven printed pages.

Our success to date gives us a particular reason to thank everybody who has contributed to molecular nutrition and its organ *Molecular Nutrition & Food Research*, including the authors, the senior editors and the members of the editorial board, as well as the reviewers who have assisted in ensuring that first-class information is distributed all over the world. Last but not least, the publisher is also thanked for effective support in all administrative questions and beyond.

We wish you all a successful and healthy New Year.

Professor Peter Schreier
University of Würzburg

Professor Hans-Ulrich Humpf
University of Münster

