



# Human nutrition at Deakin

M. L. WAHLQVIST

## Staff

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Deakin University came into existence in 1977, having absorbed the former Gordon Institute of Technology and the State College of Victoria in Geelong. It was given the responsibility for dietetic training in Victoria according to criteria of the Dietitians Registration Board that there be a four-year program leading to a registrable qualification in dietetics, the first three years being a Science degree with at least two years of biochemistry and one of physiology or, alternatively, two years of physiology and one of biochemistry. In addition, the Science degree would also provide adequate training in the nutritional and dietetic implications of food preparation. The present Science degree at Deakin University offers major studies in both human nutrition and food chemistry, and the fourth year of the program, the Graduate Diploma of Dietetics, develops clinical and counselling skills and runs for most of a calendar year, 45 weeks.

Inevitably, the undergraduate program attracts many more students interested in nutrition than can be accommodated in the Graduate Diploma of Dietetics for which there is a quota of 25. Therefore, some graduates trained in human nutrition and food chemistry will aspire to careers in the food industry, in education, especially physical education, and in government. Increasingly, Science and Dietetic graduates from our programs seek careers for themselves in nutrition research.

The University's foundation chair of Human Nutrition was taken up by Professor Mark L. Wahlqvist in February 1978. Thus began a wide range of research activities including epidemiological nutrition, physiological and biochemical nutrition, clinical nutrition, food chemistry and nutrition education. By now, a full-time academic staff of seven is complemented by part-time staff in nutrition and dietetics, an instructor in food service who is also president of the Australian Guild of Cooks (Mr Len I. Collins) and an active honours and postgraduate school. In 1981, there were five honours, five masters and three PhD candidates.

The research activities of the group have earned respect within the University which has nominated the group as one of the two 'Deakin University Research Groups', singled out for special assistance in what otherwise are difficult economic times for research at Deakin University.

The Department of Human Nutrition has forged important links with the lay, industrial, scientific and medical communities

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in Victoria. It has established a Diabetes Resources Centre in conjunction with the Diabetes Foundation of Victoria and Illawarra Community Centre in Geelong. The Diabetes Resources Centre is staffed by Ms Grace Blau. It has an active program for the nutritional modification of coronary risk factors at Alcoa Australia, one of the major industrial complexes in Geelong. The Alcoa program has been developed by Ms Alison Stewart. The group has an interest in the management of elevated blood fats (hyperlipidaemia) and the relationship of this problem to atherosclerotic vascular disease. It is developing techniques for the non-invasive monitoring of vascular disease in conjunction with Mr Ken Myers of the Department of Surgery, Monash University, at Prince Henry's Hospital. The group is also actively engaged in community education about nutrition, collectively delivering numerous addresses to community groups.

Especially through its close association with the Australian Nutrition Foundation in Victoria, the group has endeavoured to provide a resource of nutrition and food chemistry expertise for the media. Dr David Briggs is now chairman of a subcommittee of the Australian Nutrition Foundation in Victoria, looking into questions of food law and food labelling.

The group has been particularly active, especially through Delia Flint-Richter, in its assessment of nutritional problems of elderly people in Geelong and Melbourne, both in the community and in institutions. In particular, work has been carried out at Grace McKellar Home for the Aged in Geelong and at Mount Royal Hospital for the Aged in Melbourne. The group has well-developed links with Melbourne University's National Research Institute of Gerontology and Geriatric Medicine.

A joint interest in migrant studies has resulted in collaborative work with Dr Tony McMichael of the CSIRO Division of Human Nutrition and in comparative studies, by George Kosmidis and others at Deakin University, of the diet of Greek migrants to Australia with that of their siblings still in Greece.

On the community health side, the group has established a teaching unit at the Corio Community Health Centre in Geelong where, in addition to dietetic training, community education about food and nutrition is conducted. This activity is supervised by Ms Pat Crotty, whose principal interests are in the processes of nutrition education and the psychosocial aspects of feeding and eating in relation to physical handicap and obesity. Her research activities link her, in addition, with the Social Biology Resources Centre in Melbourne where she holds a sessional teaching appointment, and with Fairfield Hospital in Melbourne.

An important hospital link for the group's clinical research is that with Prince Henry's Hospital in Melbourne. Professor Wahlqvist holds an appointment as consultant physician in endocrinology and diabetes at that hospital. A major program investigating the nutritional management of diabetes is being conducted in conjunction with Dr Richard W. Simpson, a physician, and Miss Jenny MacDonald, a dietitian, the work currently being funded by the Queensland Sugar Board. The group has extended its interest in diabetes research to diabetic education at Illawarra (Miss Grace Blau), to food analyses for absorbable and non-absorbable carbohydrate (Dr Gwyn Jones and Dr David Briggs) and to studies of carbohydrate absorption in the experimental animal (Dr Richard Read and Mr Peter Dryden).

Partly because of its interest in diabetes, the group had developed an active interest in dietary fibre analysis, a program which is funded by the National Health and Medical Research Council (Briggs, Jones and Wahlqvist). The group will contribute to the dietary fibre analyses of Australian foods and should become a reference laboratory for these analyses. It will have a quality control program for the analyses with exchange of samples between laboratories.

A link with the Geelong Hospital and the Nursing Mothers Association has been forged by Ms Ingrid Rutishauser in association with Ms Helen McKay and Dr Bill McKellar, a

Geelong paediatrician, to investigate the reasons for early cessation of breast feeding. Ms Rutishauser, a nutritionist-epidemiologist with a particular interest in paediatric nutrition, is also conducting a study of growth patterns of children in the Barwon region of Victoria.

The group has also developed an interest, along with colleagues at Prince Henry's Hospital, in the nutritional consequences of alcohol abuse, in particular as they relate to upper-gastrointestinal bleeding. Dr Boyd Strauss, a medical graduate, is undertaking work towards his PhD in this field. An interest in the nutritional problems of the elderly as well as those arising from alcohol abuse, inevitably leads to an interest in folic acid deficiency, perhaps one of the most common nutrient deficiencies in Australia. On this account, the group has begun studies of the folate composition of Australian foods with particular reference to the many forms in which folate is found in food and the differences in bioavailability of the different forms. Ms Panada Sae-eung from Bangkok has joined the group on an Australian Development Assistance Bureau Scholarship to engage in this work on food folate.

The group's links with South-East Asia are growing in several ways. During 1981, Ms Lucilla Rabuco, a lecturer in Human Nutrition from the Institute of Public Health in Manila, joined the group to work on the validation of food intake methodology, particularly as it applies to vitamin A status. This interest fits in with the group's development of HPLC methodology for retinol analyses. The group has appointed a research assistant, Mrs Elizabeth McLennan, with special expertise in HPLC methodology, on funds from the Deakin University Research Group allocation.

Since Professor Wahlqvist has served as a consultant nutritionist to the Australian Development Assistance Bureau in the South-East Asian region, links have grown with Indonesia. During 1981, Dr F. G. Winarno, Director of the Food Technology Development Centre in Bogor, spent time at Deakin University and delivered the third Cottee's General Foods oration on *Problems of food and nutrition and the role of food science and technology with particular reference to Indonesia*.

It is worth noting the group's links with the Nutrition Science community. Delia Flint-Richter and Dr Richard Read were instrumental in founding the Nutrition Society of Australia in 1976. Professor Wahlqvist was chairman of the Melbourne group of the Nutrition Society from 1978 through to 1980, and is presently secretary of the Australian Nutrition Foundation in Victoria and a member of the Nutrition Committee of the Australian Academy of Science. Mrs Ingrid Rutishauser is currently a member of the National Health and Medical Research Council Standing Committee on Nutrition and a member of its Working Party on Recommended Dietary Intakes and Standards for Nutritional Assessment.

The group keeps in close contact with food service establishments in Victoria through its teaching program and with most of the major teaching hospitals in metropolitan and regional Victoria. The group's links with Home Economics teaching in Victoria also grow. A book written by the group *Food and nutrition in Australia*, edited by Mark L. Wahlqvist and published by Cassell, will be available not only for the higher school certificate in 1982, but as an introductory text for tertiary studies and for nursing education. It may also be of more general interest.

Research programs in the Department of Human Nutrition at Deakin University are funded by several sources, including the NH & MRC, Alcoa, the William Buckland Foundation, Health Underwriters, British Medical Laboratories and the Queensland Sugar Board. The Department aims to consolidate and enlarge its program through the continuing support of traditional funds for medical research as well as funds from industry.

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## Global wine production to decline

World wine production in 1981-82 is expected to decline sharply after two good crop years according to the Food and Agriculture Organization of the United Nations (FAO). In a report on the global wine situation, FAO forecast total wine production in 1981-82 at 304 million hectolitres compared with 344.6 million hL in 1980-81 and a record 370.6 million hL in 1979-80.

Wine output in Western Europe was estimated at 191 million hL, about 17% less than in 1980-81 and below average for the past ten years. Adverse weather was largely responsible for the decline. Production was lower almost throughout the European Economic Community (EEC), especially in France and Italy. French production in 1981-82 was estimated at 57 million hL, down from 70 million in 1980-81, and Italy's at 70 million hL as against 84 million previously. Wine output in Eastern Europe and the Soviet Union dropped slightly to 46 million hL from 46.5 million, while in the United States it dipped to 16.3 million from 18.4 million hL.

World wine exports, which rose to a record 51 million hL in 1979, fell to 48 million in 1980, reflecting reduced demand in major markets where domestic output had reached peak levels. However, the 1980 volume was still the second largest ever attained.