Professor Sheila Rodwell

Medical researcher who set out to unearth the links between diet and serious disease, particularly cancer

PROFESSOR SHEILA RODWELL, who died on June 16 aged 62, was an international leader in nutritional epidemiology, conducting detailed studies to clarify the biological mechanisms underlying the effects of different diets on health and disease, particularly cancer.

Known professionally as Sheila Bingham, most of her work was done at Cambridge, where she worked for the Medical Research Council for 33 years, and latterly with the university. She produced hundreds of research publications which have led to a much better understanding of the relationship between nutrition and chronic disease, thereby improving the evidence base for public health policy.

Sheila Rodwell: pioneering

She was born Sheila Harrison on March 7 1947 in St Albans. Her father was an aerospace engineer and Sheila attended Loughborough High School and Queen Elizabeth College (since merged with King's College, London), graduating as a dietitian. She was a noted beauty, voted "Miss Fresher" in her first year.

The role of nutrition in health and disease is undisputed. But there is still substantial controversy about whether nutrients, foods or dietary patterns are linked to greater risk of chronic diseases such as cancers and osteoporosis.

Much of this is due to the difficulty in objectively assessing diet in most human populations. Early epidemiologic studies relied on self-reported dietary intake using yardsticks such as the food frequency questionnaire, 24-hour diet recalls or diet histories, but these instruments were deemed subjective and of questionable validity.

Sheila Rodwell was responsible for developing objective biomarkers for assessing dietary intake and nutritional status suitable for use in large population studies. For example, the intake of many nutrients believed to have important health effects, such as oestrogen-like molecules in plant foods (phytoestrogens), had been hitherto difficult to measure.

Using these better assessments in detailed studies, Sheila Rodwell demonstrated the effects on DNA adducts (considered markers of damage, predisposing to cancer) in the colonic cells of individuals changing from a vegetarian to a high red-meat diet, thus explaining how meat might increase colorectal cancer risk.

In the 1990s, she was also one of the founding investigators of the European Prospective Investigation into Cancer, one of the largest international research collaborations, with 10 countries and half a million participants, initiated to provide more substantive evidence on the relationship between diet and cancer-risk across the wide range of dietary patterns throughout Europe.

She led some of the early keynote work, demonstrating an interaction between meat and fibre intake, such that the adverse relationship of meat eating and colorectal cancer was most apparent in those with low fibre intake.

Diet and cancer relationships have been much challenged in recent years, and Sheila Rodwell's commitment to re-examining and strengthening the evidence base resulted in her establishing the Medical Research Centre for Nutrition and Cancer Survival and Prevention in the University of Cambridge in 2005.

Sheila Rodwell also believed in making a difference to public health and was a long standing independent expert on the Department of Health's Committee for Medical Aspects of Nutrition, later the Food Standards Agency Scientific Advisory Committee for Nutrition. There she was particularly involved in the evidence and recommendations on salt reduction in the population.

Her contributions were recognised by numerous prizes and awards, including her fellowship of the Academy of Medical Sciences and honorary professorships in Cambridge and Coleraine. She was appointed OBE in June this year, but died of cancer a few days after the announcement.

She married, firstly, Roger Bingham, in 1970. In 2000 she married Simon Rodwell, who survives her.