Some fifteen years ago, the idea of convening a professional conference focusing on vegetarian nutrition was first suggested. After several years of planning, the First International Congress on Vegetarian Nutrition was held in Washington, DC, in 1987 (1). Since that time, at 5-y intervals, additional congresses have been convened (2). The most recent was held at Loma Linda University in California in March of 1997. The proceedings of this congress are presented herein.

From antiquity, vegetarian diets have been followed for a variety of reasons, albeit with widely different nutritional outcomes. Accordingly, many scientific and professional questions have been raised. The international congresses on vegetarian nutrition were organized to investigate these issues, evaluate the outcomes, ponder the questions, stimulate new research, and provide practical applications.

Through the years, vegetarians have been questioned, ridiculed, and considered to be eccentrics. More recently, however, vegetarian diets have become an accepted option for obtaining the nutrients we all need. Nonetheless, there continues to be great diversity among vegetarians in their dietary practices, and not all vegetarians are aware of the issues that must be addressed if optimal nutritional status is to be the outcome. As a consequence of the increased interest in vegetarian diets, health care professionals are encountering growing numbers of individuals calling themselves vegetarians. Thus, there is need for information on vegetarian nutrition to be widely disseminated to both professionals and the public.

Examples of recent publications designed to support both health care professionals and practicing vegetarians include the well-organized and comprehensive Dietitian’s Guide to Vegetarian Diets (3); the most recent revision of the American Dietetic Association’s position statement on vegetarian diets (4); a new publication edited by Mark Messina, Vegetarian Nutrition: An International Journal; and a university-based monthly newsletter, the Vegetarian Nutrition and Health Letter, that focuses on vegetarian nutrition issues. In addition, numerous books providing practical information and recipes have been published.

Although most of the information presented at this congress focused on the dietary practices of vegetarians, it has broader applications for the general population. In the past few years, much information has accumulated on the health effects of plant foods, and the adequacy of various types of vegetarian diets to supply essential fatty acids, particularly docosahexaenoic acid. The relation between vegetarian diets and physical fitness was also discussed.

As before, this congress emphasized practical applications. The first congress included a review of the diverse vegetarian food guides then extant (5) and the second congress presented a vegetarian food guide based on food groups (6). The third congress included the presentation of a new vegetarian food guide pyramid developed through consensus by a group of nutrition scientists representing various institutions and dietary traditions. It is recognized that dietary choices are the result of personal decisions that are based on differing philosophical approaches. Individuals representing such differing views participated in a panel discussion of the convergence of various vegetarian dietary practices.

It is the hope of the organizers of this congress that these proceedings will stimulate new research, provide useful information to health care professionals, and ultimately benefit the individuals who choose to consume vegetarian and plant-based diets.

Patricia K Johnston
Joan Sabaté

REFERENCES

The Third International Congress on Vegetarian Nutrition provided an occasion to recognize 2 individuals who helped to initiate the scientific investigation of vegetarian dietary practices, to validate their nutritional adequacy, and to disseminate both scientific and practical information about vegetarian diets. We acknowledge with gratitude their accomplishments and contributions to the field of vegetarian nutrition. These proceedings are in recognition of the work of Mervyn G Hardinge and are dedicated to the memory of UD Register.

Mervyn G Hardinge

UD Register
Recognition
Mervyn G Hardinge

In the fall of 1948, Mervyn G Hardinge, MD, enrolled in the Master of Public Health program in nutrition at the Harvard University School of Public Health. A paper authored by Mark Hegsted and Fredrick Stare from Harvard on minimum protein requirements, a topic of considerable interest at the time, influenced his decision. Before this, while awaiting draft papers that never came, Hardinge went to his alma mater, the College of Medical Evangelists (later to become Loma Linda University) to teach anatomy.

The second semester of his master’s program at Harvard was light and he took steps to initiate a doctoral program. After careful thought and considerable reflection, he decided to compare the nutritional status of vegetarians and nonvegetarians. Before making his request, he completed a literature review only to find very few published articles on the topic. Those that were available were almost without exception negative with regard to vegetarian diets.

Because no one had done the type of study he proposed, he was given permission to pursue this project for his doctorate. He was required, however, before beginning the research, to spend several months working in the kitchen of Peter Bent Brigham Hospital learning the different cuts of meat, fish, and fowl so that he, a lifelong vegetarian, would be knowledgeable when appraising the diets of his nonvegetarian subjects.

He returned to Loma Linda to start his research only to encounter an unexpected problem. He was told that he would have to change his research project. When asked why, the dean responded, “Because if you find the diets of vegetarians are deficient, it will embarrass us.” Hardinge replied, “If the diets are deficient, we should be the first to find out, not others. He continued his research despite administrative dissuasions to the contrary. It was not the last hurdle he would face.

His criteria for accepting subjects into the study were stringent because he knew he would face tough questions, and he did. First, his methodology was challenged by one of his committee members; after he showed that his methods were those of that very committee member, his dissertation was approved. Then came his dissertation defense. When asked, “Does a vegetarian make an appropriate investigator for this type of study?” Hardinge replied, “Would a nonvegetarian be any less prejudiced? There are only 2 types of people in this world; one is either a vegetarian or a nonvegetarian.”

Another questioner asked him to comment on the many negative vegetarian studies in his bibliography. After referring to 2 of the titles, “Megalocytic anemia in a young vegetarian” (1) and “Nutritional anemia in a vegetarian” (2), Hardinge asked, “Would a reputable journal publish such papers if the titles read, ‘Megalocytic anemia in a young nonvegetarian’ or ‘Nutritional anemia in a nonvegetarian’?” After a ripple of laughter subsided, he continued: “There are 2 possible reasons for publishing these types of papers. Either the authors were prejudiced against vegetarians or it was so rare to find a vegetarian with these types of problems that they needed to be reported.”

He was awarded his degree in 1951 and with his major professor, Fredrick Stare, began to publish his results. The first paper showed that vegetarian diets were adequate for adults, pregnant women, and adolescents (3). At the time of his investigation there was little interest in carbohydrates and fats. Nonetheless, he measured fat intakes from animal and plant sources and serum cholesterol concentrations. His second paper was the first to show that animal-fat intake is linked to serum cholesterol concentrations (4).

Two years later, in 1956, he published data on the fat and fatty acid contents of foods (5). He then used this information to analyze the diets of his subjects. He reported that vegetarians had significantly higher intakes of polyunsaturated fatty acids (6). The data in this paper were used for many years by researchers evaluating the fatty acid content of diets.

In 1958, some 14 y before dietary fiber became of interest in nutrition, he analyzed his subjects’ diets for fiber content. He was the first to show that the amount of fiber in the diet influenced blood cholesterol concentrations (7). The final publication from his dissertation work returned to the topic that took him to Harvard years before: protein. After analyzing the amino acid intake of vegetarians, he reported than vegetarians obtained adequate amounts of all essential amino acids (8).

Before the final report of his analytical findings was published, Hardinge decided to submit for publication 2 chapters of his dissertation regarding the history of vegetarian diets and scientific studies of vegetarians. Because of the nature of the material, the editor of the journal to which they submitted decided to have it appraised by more reviewers than usual. The positive and negative comments were about equal in number. Hardinge remembers one with clarity: “The names of John Harvey Kellogg and Sylvester Graham in our journal; never.” The editor ended her letter with a cryptic comment suggesting that Hardinge should proceed nonetheless. The 2 papers (9, 10) were so well received that he was asked to submit a third describing what constitutes an adequate vegetarian diet (11). Reprints of these articles were sold by the journal for years.
Hardinge’s quest for knowledge was ever present and he went on to obtain a PhD in pharmacology at Stanford University. In 1967, he became the founding dean of the new School of Public Health at Loma Linda University, a position he held until 1976. Two years later he was named emeritus dean.

In the 50 y since Hardinge began his investigation of vegetarian dietary practices, attitudes have changed considerably among both scientists and the general population. In 1997, Hardinge was named University Alumnus of the Year by the same institution that years before was afraid that he would be an embarrassment. In response to his award at the Third International Congress on Vegetarian Nutrition, Hardinge said, “Attitudes toward vegetarian diets have progressed from ridicule and skepticism to condescending tolerance, to gradual and sometimes grudging acceptance, and finally to acclaim.”

Ideas that at one point seem capricious or foolhardy, with a solid base of evidence, may grow into accepted concepts or at least recognized alternatives. Such has been the shift in attitudes toward vegetarian diets. Although still questioned by some and not practiced optimally by all who ascribe to them, evidence continues to accumulate that vegetarian diets may offer significant health benefits.

A true pioneer in vegetarian nutrition research, Mervyn G Hardinge led the way with the highest standards of scientific conduct, resolve in the face of difficulties, and commitment to find answers regardless of the consequences. We who would continue his search must be equally committed to the same high ideals.

Patricia K Johnston

With special appreciation to Mervyn G Hardinge for sharing his remembrances.

REFERENCES
Dedication

UD Register, 1920–1997

Just 4 short months after the Third International Congress on Vegetarian Nutrition recognized him for his contributions to the promulgation of information about vegetarian diets, UD Register died as a result of an accident in his home. These proceedings are dedicated to this man, who was beloved by all who knew him.

Ulma Doyle Register was born in West Monroe, LA, on February 4, 1920. He was attracted to chemistry early on and received a BS degree in that area from the Madison College, Madison, TN, in 1942. At Madison, he worked for a company that manufactured meat alternatives, and it was there that he adopted a vegetarian diet, a practice he followed enthusiastically for the remainder of his life.

World War II interrupted Register’s educational plans, but his orders from the US Army allowed him to complete his master’s program in organic chemistry at Vanderbilt University in 1944. A chance meeting with a member of the army’s nutrition division led to his reassignment to that division.

After completing his military assignments in 1947, he enrolled in a doctoral program at the University of Wisconsin at Madison. His dissertation research was in the identification of the nutritional factors involved in pernicious anemia. After Merck and Co, Inc, identified vitamin B-12, he eagerly continued to pursue its identification in various foods. The study of issues related to vitamin B-12 remained his lifelong interest. He received his doctorate in 1950 and, after a year of postdoctoral work at Tulane University setting up their vitamin B-12 laboratory, he accepted an invitation to join the School of Medicine at Loma Linda University as an instructor in biochemistry.

Register soon discovered that not everyone welcomed his advocacy of a vegetarian lifestyle. Recognizing that argument accomplishes little, Reg, or Reggie as he like to be called, performed studies both in humans and animals to show the efficacy of a vegetarian diet. Among other accomplishments, he documented the nutritional adequacy of vegetarian diets to supply protein and reported the biological values of vegetarian foods.

In 1967, Register became the chair of the Department of Nutrition in the newly organized School of Public Health. At that time, graduates from the department’s dietetics program were not recognized by the American Dietetic Association primarily because of its negative attitudes toward the program’s emphasis on vegetarian diets. He was determined to change that perception and he did.

The acceptance of vegetarian diets and those advocating them became apparent when the California Nutrition Council elected Register to become their third president. His expertise became widely known and he was invited to participate in the 1969 White House Conference on Food, Nutrition, and Health. Register was invited to speak about vegetarian diets at the 55th annual meeting of the American Dietetic Association in 1972. Later, at their request, he coauthored a continuing education manual for dietitians on vegetarian diets. In 1974, he was invited by the Food and Nutrition Board of the National Research Council to write their statement on vegetarian diets.

UD Register began his tenure at Loma Linda University as an instructor. Although his professorial rank ultimately became emeritus professor, he remained, in the truest sense of the word, an instructor. He was never one to merely profess, but rather to live what he wanted to teach. And teach he did, in the formal classroom, and just as diligently in informal settings, wherever they might be. His understanding was combined with the ability to explain the complexities of nutritional science and make theory practical to people of widely different backgrounds.

Early in his career, Register realized that sharing research results with the general public was at least as important as the research itself. He traveled across the nation and around the world, sharing his knowledge of vegetarian nutrition. His clear explanations brought understanding to thousands. Register was quick to see the advantages of the mass media, and with his wife, Helen, became an integral part of Art Linkletter’s It’s Your World television program.

Those who knew him were delighted to see him honored: first at the School of Public Health recognition banquet at which he received the school’s Distinguished Service Award; second at the Third International Congress on Vegetarian Nutrition for his contributions to our understanding about vegetarian diets; and finally, at Loma Linda University’s graduation, at which he was honored with the university’s Distinguished Service Award. Throughout all the recognition, he remained the humble and caring man he had always been, a man thoroughly dedicated to what he believed in. Reg was much more than a mere scientist, researcher, academician, or administrator. He was the truest of gentlemen, one whose optimism, patience, and encouraging ways are missed. We will long remember the inspiration of his life and are pleased to dedicate these proceedings to his memory.

Patricia K Johnston

I am grateful Glen Blix, who compiled and presented biographical information in a special program at the Third International Congress on Vegetarian Nutrition.