

## History of the Division of Nutritional Sciences, University of Illinois

Up to 1981

Written by Willard J. Visek and John A. Milner

I. The chronology of events leading to the present organization of the Division of Nutritional Sciences are reviewed below.

### A. Agricultural Development, Nutrition and the Livestock Industry in Illinois

Davenport Hall was the first major building which the people of Illinois built for the College of Agriculture in 1867. Carved in stone across the front of this building are these words, "The wealth of Illinois is in her soil, and her strength lies in its intelligent development". Evidence that intelligent development of Illinois soil has been one of the guideline principles followed by the University and its College of Agriculture through research, teaching and public service programs is amply provided by the present high production of grain, soybeans and other crops on Illinois farms. However, it soon became clear that increased production was of limited value unless these items were utilized directly or indirectly by humans. A strong livestock industry developed to convert forages and crops to products of higher usefulness to man as a result of increased crop production. The University has been a primary leader in developing livestock production and management practices. The science of nutrition applied to food producing animals was absolutely essential for the state's livestock industry to reach its present position as one of the most advanced in the world. Although animal nutrition information is generated to serve livestock producers, this knowledge has and continues to make significant contributions to human nutrition and the biological sciences.

### B. Early leaders in Nutrition at the University of Illinois

Early leaders in establishing the reputation of the University of Illinois as a major center of teaching and research in nutrition were W. C. Rose of the Department of Chemistry, plus H. H. Mitchell and T. S. Hamilton of the Department of Animal Science. Each served on the faculty more than 30 years and began their distinguished careers with the University in the early 1920s. During a "Symposium on Protein Nutrition and Metabolism"<sup>1</sup> on the campus in 1962 commemorating the work of these well-known scientists, R. H. Barnes, then Dean of the Graduate School of Nutrition at Cornell University, pointed out that their combined bibliographies included no less than 500 items related mainly to nutrition. The following is also his statement quoted from the proceedings. "I am certain that no institution in the world can surpass the extensive studies of nutritional interrelationships in different animal species that have been conducted on the campus of the University of Illinois."

Before these dominant figures retired, other faculty members established nutrition-related programs in several departments, most of which were in the College of Agriculture. These continue to emphasize basic and applied research relating to the nutrition of animals

---

<sup>1</sup> Kastelic, J., H. H. Draper and H. P. Broquist. Symposium on Protein Nutrition and Metabolism. Spec. Publ. No. 4, University of Illinois College of Agriculture, Agricultural Experiment Station, Urbana, IL 61801

and man, including the physiological and biochemical aspects of nutrition. The departments most actively engaged in teaching, research and public service in nutrition in the College of Agriculture are Animal Science, Dairy Science, Food Science, and the Foods and Nutrition Department of the School of Human Resources and Family Studies (formerly Home Economics).

Other recognition of the University as a leader in training and research in the nutritional sciences is evident from excerpts from the 1965 USDA evaluation review. This review contained the following statement: "The University of Illinois has probably contributed more to the science of experimental nutrition over the past 50 years than any other land-grant college, with the possible exception of the University of Wisconsin... It would be a fair statement to say that there is probably no greater concentration of outstanding and well-known experimental nutritionists on any one campus in the entire country... Besides its remarkable record in nutrition research, Illinois has served with unusually great distinction as a training center for many well-known nutritionists who are now scattered throughout the country..."

An evaluation of the Food Science Department by an outside USDA review team in May 1979 again acknowledged the strength of nutrition teaching and research at the University of Illinois and the need for fostering the continued development of the Nutritional Sciences Program. These comments were supported by the University of Illinois being awarded more competitive research grants in human nutrition than any other institution in the United States. It is important to emphasize that all of the recipients of these awards are faculty in the Division of Nutritional Sciences.

### C. Participation by University of Illinois Faculty in State, National, and International Programs in Human Nutrition

#### 1. International

After World War II there was worldwide concern about the influence of nutritional status on human health and world peace. In the United States federal agencies responded by forming an Interdepartmental Committee on Nutrition for National Defense (ICNND), which later became The Nutrition Program of the Center for Disease Control, Health Services and Mental Health Administration. From 1956 through 1967 this program directed nutrition surveys in 33 developing countries. Professors Kenneth E. Harshbarger and Karl E. Gardner, of the Department of Dairy Science, having served prominently as nutrition officers of the U.S. Army's Sanitary Corps during World War II were the first University of Illinois faculty members to be asked by the federal government to serve on its Survey teams. They each served on several later surveys. Later, Professors R. Guarth Hanson and Harry P. Broquist, then of the Department of Dairy Science, served on survey teams elsewhere. Both Drs. Harshbarger and Broquist were instrumental in the development of the Division of Nutritional Sciences at the University of Illinois.

#### 2. National

Survey approaches developed in the international effort were subsequently employed in the 10 state U.S. National Nutrition Survey. This survey revealed that many U.S. citizens, rich and poor alike, were victims of malnutrition. Ignorance about nutrition and its relation to human health and well-being was equally widespread among our population. Concerns

expressed by national leaders were followed by a number of Congressional initiatives. In a message to Congress in 1969, President Nixon expressed dismay about the poor nutritional status revealed in certain population groups of the U.S. and appointed a Special Consultant to organize a White House Conference on Food, Nutrition and Health, which delivered its report to the President in the same year.

The Food and Agriculture Act of 1977 further stated that "the Secretary shall develop and implement a national food and human nutrition research and extension program." This act resolved some of the controversy between the National Institutes of Health and the U.S. Department of Agriculture by designating the latter to have a primary responsibility for human nutrition.

Another report giving major emphasis to nutrition was that of a national working conference on "Research to Meet U.S. and World Food Needs" in 1975 by the Agricultural Research Policy Advisory Committee (ARPAC). O. G. Bentley, Dean of the College of Agriculture, was a co-chairman of this committee.

### 3. State

After struggling for several years with the difficulty of reaching the poor and disadvantaged, especially in Chicago and East St. Louis, the Illinois Cooperative Extension Service was delighted when the Congress late in 1968 diverted \$10,000,000 from the poverty program to be used by the States in testing a new nutrition outreach program into the inner cities. Illinois pioneered the use of part-time homemaker aides from the target population by teaching them fundamentals of human nutrition and how to provide the essential nutrients at minimum cost, and having them serve as the heretofore missing trusted, interacting emissary between the State service and a needful clientele.

In April 1970, under the leadership of Professor Gilbert Leveille, then Professor of Nutrition in the Department of Animal Science, funds from the USDA Expanded Food and Nutrition Program were allocated to the Agricultural Experiment Station for a survey of the nutritional status of elementary school children of the Danville, Illinois school system, in which students in the Nutritional Sciences Program participated. The results were reported in an M.S. thesis under Dr. Leveille's direction. Similarly, under the direction of Professor N. E. Nelson of the University of Illinois College of Medicine, Chicago, and with the collaboration of the faculty of the Nutritional Sciences Program and other scientists at Urbana, a nutritional survey was made of citizens of Holmes County, Mississippi. This, too, was the subject of an M.S. thesis by a student in the Nutritional Sciences Program. Along with the growing use of federal food stamps in preventing hunger among the poor, the program opened the door to educational opportunities long provided, but unknown to many. A mandate of the Congress to the Cooperative Extension Services of the State Land Grant Universities is that a major segment of the maintenance of the public health of the nation through the nutrition of human beings is a function of the nutritional sciences faculties of those universities.

### D. University Initiated Programs in Nutritional Sciences

While these events were taking place at the State and National level, the University of Illinois was actively engaged in important nutrition-related initiatives. As part of the observance of the University of Illinois Centennial, a symposium, "The Land-Grant University and World Food Needs", was sponsored by the College of Agriculture in October 1967. A number of outstanding scholars and observers of the world food situation were brought to the campus for this three-day symposium "to put world food needs in clear perspective, and to

assist administrators, researchers, and teachers in our colleges to come to grips with some of the problems of developing international agricultural programs.”

The need for greater emphasis on human nutrition was also being recognized on the University of Illinois campus. In March 1965, the College of Agriculture initiated studies of research and graduate education needs and opportunities in the field of nutrition at the University. Eminent nutrition scientists were brought to the campus and other national leaders were engaged in separate discussions. On-campus discussions involved Provost Lanier, other members of the campus administration and key faculty. An *ad hoc* Nutritional Sciences Coordinating Committee, chaired by Professor H. H. Draper, examined the needs and opportunities, reviewed graduate course offerings at that time, organized an interdepartmental seminar and submitted a training grant proposal to the National Institutes of Health. The results of this study established that nutritional sciences was central to the Mission of the College of Agriculture and that strong programs of teaching, research, graduate education, and public service should receive major emphasis. The Committee recognized that studies in human nutrition had not received major attention because of the lack of a medical faculty and other resources. The Committee at that time also pointed out that the work in nutrition dispersed in four departments (Animal Science, Dairy Science, Food Science, and Home Economics) impeded development of recognition for nutrition as a field of graduate education. Until 1966, separate Departmental training programs led to Ph.D. degrees in several fields (Animal Science, Dairy Science, Food Science, and Home Economics), although formal coursework and thesis research were frequently similar. There was no interdepartmental seminar, little coordination of course offerings, no joint teaching, and only limited contact between research personnel in seminars or research conferences. Most notably, there was no Ph.D. program in nutrition or nutritional sciences, and the word “nutrition” did not appear in the index of either graduate or undergraduate catalogs, even though other major institutions recognized it as an important independent discipline.

The formation of a Center, or Institute of Nutrition was also considered by a faculty committee in 1966. However, after much debate, it was decided that the greatest need was for awarding advanced degrees in Nutritional Sciences. It was felt that students who completed a program of graduate training in this area should be identified with their field of professional competence. An outgrowth of these deliberations was a proposal for a graduate field of study known as the Nutritional Sciences Program, which was approved by the Board of Higher Education on December 2, 1968. Subsequently, the Dean of the Graduate College appointed a Committee on Nutritional Sciences, now known as the Executive Committee, consisting of five faculty members from departments who were active in research and graduate training in nutrition. Upon recommendation of the Committee on Nutritional Sciences, the Dean of the Graduate College subsequently made additional appointments to the Graduate Faculty in Nutritional Sciences, which presently numbers forty-five.

The proposal of an interdepartmental program in the nutritional sciences was met with considerable enthusiasm when received by the Illinois Board of Higher Education, which viewed it as a desirable prototype for other interdepartmental and interdisciplinary programs in the University. Despite this generally cordial acceptance at administrative levels, implementation and integration into departments has been occasionally thwarted over the years.

A major shortcoming in the organizational structure for the Nutritional Sciences Program has always been its heavy dependence upon the voluntary support of the participating

departments. All members of the faculty of Nutritional Sciences hold departmental appointments and receive their salary and other support through these departments. Space and facilities for graduate students in Nutritional Sciences are also provided by the participating departments. No formal budget has been allocated to the program.

The Program, however, achieved independence in a number of areas. Initially, with the exception of the seminar, all core course offerings were selected from existing courses within the College of Agriculture. From 1973 onward, the Program offered two of its own core courses under the Nutritional Sciences listing, and a third Nutritional Sciences course in Clinical Nutrition was initiated in the fall of 1977 by Nutritional Sciences faculty in the School of Basic Medical Sciences. From 1968 to 1976, the Program had support from the National Institutes of Health through a training grant, which provided an average of \$65,000 per year in stipends and funds for graduate students.

#### E. University Initiatives to Strengthen Human Nutrition

Following the study in 1965, the University took active steps to augment research and graduate teaching programs in human nutrition. In June 1966, the College of Agriculture obtained authorization to use the budget line for the former Dean of the College of Agriculture, L. B. Howard, to provide the necessary FTE and funds for hiring a senior scientist in human nutrition by the Department of Food Science. In the memorandum of approval from Provost Lanier, authorization was also contained for the Department of Home Economics to use funds available for two part-time positions towards the salary for an associate professor for work in the field of human nutrition. On July 18, 1966, Dean Bentley of the College of Agriculture met with the Department Needs of Dairy Sciences, Home Economics, Food Science, Animal Science and Professor H. H. Draper, representing Nutritional Sciences, to discuss programs in nutrition with special attention to the qualifications of the person to be sought for the position in the Department of Food Science. After considerable discussion it was generally agreed that a physician with a Ph.D. in nutrition should be sought. Subsequently, the Department of Food Science was mandated the responsibility for primary leadership in the undergraduate and graduate teaching and research programs in human nutrition in the College of Agriculture. Unfortunately, the lack of a medical school component at Urbana frustrated this attempt and an M.D.-Ph.D. candidate was not found.

Congress also had authorized the "Expanded Nutrition Program" through the Cooperative Extension Services with the objective of improving the nutritional status of the U.S. by providing funding for additional extension specialists in human nutrition. Dr. Robert J. Reber, trained in nutritional sciences, was appointed to this position in the School of Human Resources and Family Studies in the Department of Foods and Nutrition.

#### F. THE DECADE OF THE 1970s

Establishment of the Nutritional Sciences Program in 1968 came at a propitious time. Concern about nutrition had grown nationally. Workshops and national symposia were revealing the lack of nutrition education at all levels of our society and particularly in the curricula of health professionals. The 10 State Nutrition Survey revealed significant

malnutrition in the U.S., as well as, evidence of its correlation with chronic diseases. Both of these topics were brought to national attention by Congressional hearings. In 1968, surgeons at the University of Pennsylvania described a method now widely used for complete feeding of patients by a central vein. This development made it possible to increase the lifespan of patients suffering from illnesses, which in earlier times caused death by starvation. All of these developments created an awareness of the importance of nutrition in the medical profession and among the public who began asking their physicians for more information about nutrition in medical care. Simultaneously, with the approval of Nutritional Sciences Program, the Illinois Board of Higher Education was also taking significant steps toward establishing medical education on the Urbana-Champaign campus.

## 1. Establishment of a Medical School at Urbana-Champaign

An Illinois Board of Higher Education Report in 1968 recommended establishment of medical education on a regional basis and subsequent plans called for regional schools in each of the major cities of the state. The establishment of the School of Basic Medical Sciences on the Urbana-Champaign campus (SBMS-UC) in 1970 and of the allied health and nursing programs was the first step in developing medical education in the region of East Central Illinois. SBMS-UC accepted its first class of 16 freshman in 1971 for one year of medical training. Until 1978, all such students completed their subsequent clinical training at other schools of the University of Illinois Medical College system. The School of Clinical Medicine at Urbana-Champaign (SCM-UC), also a part of the Medical School, was established in 1978, making it possible for students to complete four years of medical training on the UC campus. The School admitted its first class of 13 clinical students in July 1978. This clinical school emphasizes combined degree programs whereby medical training can be completed while requirements for a graduate or professional degree in one of over 20 other disciplines can also be satisfied. Of the first 9 combined degree candidates, 3 have elected to work toward a Ph.D. in Nutritional Sciences while completing their M.D. degrees.

Early in the planning for development of a School of Clinical Medicine the faculty in the College of Agriculture and their administration engaged in discussions with the Medical School here and with the University of Illinois Medical College at Chicago about cooperative development of Clinical Nutrition as a major emphasis in SCM-UC. In 1975, SMC-UC appointed Dr. Willard J. Visek, a physician with Ph.D. training in nutrition, to direct Clinical Nutrition. In June 1979, Dr. Ralph A. Nelson, a Mayo Clinic trained physician with a Ph.D. in Physiology joined this group as a Professor of Clinical Sciences (Nutrition and Metabolism). Carle Foundation Hospital agreed to provide laboratory and office space for Dr. Nelson, who also serves as Director of Research for the Carle Foundation Hospital and of its Nutrition Support Service. This unit now accommodates a number of graduate students in the Division interested in clinical nutrition research.

## 2. Evaluation of the Nutritional Sciences Program in 1972

In July 1972, Vice-Chancellor Weir requested an evaluation of the Nutritional Sciences Program to which the Chairman of the Committee of Nutritional Sciences, Professor H. H. Draper responded. Although Professor Draper noted that the original objectives of the Program had largely been achieved, he drew attention to the major problems. He expressed these as follows:

Although the Program has received strong support from most of the administrative units with which it is associated, in common with other interdepartmental programs of this

nature, it does not enjoy the same operational prerogatives available to departmental graduate programs. For example, the faculty does not have the prerogative of making teaching assignments in the core courses except as these assignments may be agreed to by their departments. Unless the participating departments view the Program as an extension of department activities, rather than as an encroachment on the departmental field, there is a danger that a competitive relationship may develop. Changes in administrative officers, therefore, can have a serious effect on the stability of the Program.

Nutrition is an important component of the traditional graduate programs in Animal Science, Dairy Science, Food Science and Home Economics. It has been necessary to establish some guidelines, which can distinguish between the training offered students in the department major fields. It was concluded that this distinction could be made only in terms of the research interests of the faculty, which have been appointed to the Program and the core course requirements. The selection of the faculty has been made primarily on the basis of their interest in basic experimental nutrition, metabolism and human nutrition. In some instances the distinction between the research activities of different faculty members has been somewhat ambiguous and arbitrary.

Although the difficulties facing the Program in 1972 were well-recognized by the faculty, no specific solutions were suggested.

Professor Draper resigned as Chairperson in June 1974 and Professor Patricia V. Johnston became the new Chairperson. During the next three years the number of faculty was increased to twenty and a new dimension was added in that the Program developed ties with the new Schools of Basic Medical Sciences and Clinical Medicine, and Professor Willard J. Visek, Professor of Clinical Nutrition and Metabolism, became the first Nutritional Sciences faculty member from the medical field.

Although the Program continued to make progress during 1974-1976 in teaching, research, and training of high quality students, there was a growing concern among the faculty that the governance must be changed if the Program is to meet future needs and maintain its reputation for excellence. Of particular concern was the failure in 1976 to obtain renewal of the National Institutes of Health Training Grant, which the Program had held for eight years. It was felt and stated by key federal leaders that the administrative structure for the Program played a significant part in the decision of the reviewers to recommend disapproval of the training grant renewal.

### 3. Appointment of the *Ad Hoc* Committee in Nutritional Sciences

In December 1976, Professor Johnston wrote to Dean of the Graduate College, George A. Russell, suggesting that a new form of governance for the Program be considered. After discussions with Professor P. V. Johnston, Professor W. J. Visek, and Professor Arthur J. Siedler, who assumed Chairmanship of the Program in June 1977, Dean Russell appointed an *Ad Hoc* Committee on Nutritional Sciences. His charge to the Committee was "to explore what might be done to restructure graduate education in nutrition on this campus and to develop a governing structure that will encourage participation of the many talented people that exist in all of the departments now capable of offering graduate education and research opportunities in this very important field of endeavor." The committee was asked to consult with faculty, deans, and directors and "to develop possible alternatives for strengthening the Nutritional Sciences Program."

The *Ad Hoc* Committee was constituted as follows: Professor D. I. Padberg (Agricultural Economics), Chairman; Professors Lloyd Barr (Physiology), D. E. Bauman (Dairy Science), R. R. Bell (Foods and Nutrition), P. V. Johnston (Food Science), S. P. Mistry (Animal Science), A. J. Siedler (Food Science), and W. J. Visek (School of Basic Medical Sciences). Of the original Committee, Professor Bauman went on sabbatical leave and was replaced by Professor Jimmy H. Clark and Professor M. F. Picciano-Milner replaced Dr. Bell, who resigned from the University. The recommendations of the Committee are summarized as follows:

A. We recommend that initiative for developing nutrition teaching and research programs which coordinate across the several departments and colleges of the University be vested with the College of Agriculture. This is desirable for two reasons. In the first place, most of the resources to be shared come from that College. In addition, there is the prospect that public support for agriculture will have a much higher visibility and focus on nutrition (See Title XIV of the Food and Agriculture Bill of 1977).

B. We recommend the adoption of a new form of governance as soon as possible.

C. We also recommend that the suggestions for funding the interim structure be adopted immediately. A unit within an ongoing department seems to have the best potential for developing strong programs because it has unambiguous lines of authority and responsibility. A unit associated with the Graduate College has less potential for strength because of inevitable ambiguity between responsibility to the Nutritional Science Program and parent departments. On the other hand, such a loose pattern is less threatening to existing departments and some individuals with mixed allegiances.

#### G. Implementation of the Recommendations of the *Ad Hoc* Committee

Professor D. I. Padberg, Head of the Department of Agricultural Economics and Chairman of the *Ad Hoc* Committee on Nutritional Sciences transmitted the final report of the Committee to the Graduate College on April 4, 1978. This was followed by discussions involving the Colleges of Agriculture and Medicine and the Graduate College, whereupon it was decided that the most desirable administrative structure for the Nutritional Sciences Program was a Division of Nutritional Sciences in the College of Agriculture. Thereupon, Dean O. G. Bentley, of the College of Agriculture, appointed an *ad hoc* Committee for Recommending Changes in the Administration Structure of the Nutritional Sciences Program. Committee members represented concerned constituents of the College of Agriculture and Medicine. This Committee was charged with the responsibility of developing an administrative plan for the operation of the graduate teaching and research program to be administered by the Division. Members of this Committee were Professors D. H. Baker, Animal Science; L. L. Birch, Foods and Nutrition; K. E. Harshbarger, Dairy Science; P. V. Johnston, Food Science; B. A. Jones, Agricultural Experiment Station; A. J. Siedler, Food Science; and N. J. Visek, the School of Clinical Medicine.

On August 17, 1978, Dean Bentley informed Truman Anderson, Executive Dean of the College of Medicine, and D. K. Bloomfield, Dean of the Schools of Basic Medical Sciences and Clinical Medicine--UC, of his intent to proceed with the reorganizational plan and asked for their counsel and guidance.



On August 29, 1978, Dean Bentley, acting on the recommendation of the Faculty Committee and the *ad hoc* Committee for Recommending Changes in the Administrative Structure of the Nutritional Sciences Program, authorized the formation of a Division of Nutritional Sciences with a director as its administrative head. Dean Bentley, of the College of Agriculture, informed Associate Dean Clark, of the Graduate College, that he was proceeding immediately to implement the *ad hoc* Committee recommendations.

#### H. Nutritional Sciences Needs and Commitments

Beginning in December 1978, a search was conducted for candidates to fill the position as Director. Several applications were received and the position was tendered in the summer of 1979 to a candidate who declined. During discussions with this candidate it became apparent that insufficient authority to participate in allocations of space and faculty time, and assurance of operating funds were features of the position which the candidate felt were insufficiently defined.

The Division of Nutritional Sciences and its program continued to be topics of intense discussion during 1979. There were concerns about the participation by departments with strong programs in experimental animal nutrition and the need to fill faculty vacancies created by retirement or resignations. Particular concern also related to key course offerings such as Nutritional Science 411, where were being jeopardized by faculty resignations from participating departments and lack of coordination of sabbatical leaves.

On November 12, 1979 Professors Siedler and Visek proposed that finite and formalized line budgeting of Nutritional Sciences faculty salaries be contractually assigned to the Nutritional Sciences Division. Subsequently, a discussion was held between Professor Siedler and Dean Bentley, R. G. Cragle and B. A. Jones regarding this approach and it was proposed to explore implementation of this concept with the faculty of Nutritional Sciences and Directors and Department Heads of participating units.

At this same time, the Agricultural Experiment Station published a document listing the "Broad Research Areas Now Identified by the Agricultural Experiment Station as Needing Coordination". Human Nutrition and Rural Development was one of the five priority areas listed.

Faculty meetings were held on January 18, 1980 and February 1, 1980 with appropriate administrators invited. On February 1, the attending faculty voted unanimously to support, in principle, the concept expressed in the proposal entitled "Proposal to Formalize Commitment of Resources to the Division of Nutritional Sciences." It was further recommended by the faculty that the February 1, 1980 draft of this proposal be refined prior to forwarding to the administration and that brief synopsis of the accompanying historical document be used in the introductory statement to the proposal. It was further recommended that an Interim Director of the Division of Nutritional Sciences be appointed to initiate implementation of the procedures necessary to accomplish the mission and goals of the Division.

The discussion to formalize the commitment of resources to the Division continued into the 1980s. In February 1980, the Nutritional Sciences faculty unanimously approved, in principle, the concept expressed in a document entitled "Proposal to formalize commitment of resources to the Division of Nutritional Sciences".

In July 1980, the Illinois Agricultural Experiment Station initiated a search for an assistant director to coordinate station activities in the area of human nutrition and rural development. Since this new position would have significant overlap with the activities associated with the Director of the Division it was recommended by the Nutritional Sciences faculty that the individual selected also be appointed Acting Director of the Division. Dr. J. A. Milner was appointed on February 21, 1981 as the Assistant Director in the Station and Acting Director for the Division.

On August 28, 1981 the first Nutritional Sciences retreat was held to discuss present activities and future goals of the Division. In September 1981, Dr. J. A. Milner was appointed, with the concurrence of the Nutritional Sciences faculty, as the Director of the Division.

In December 1981, the Division established an External Advisory Committee to assist in evaluating the needs of the state and nation and how the Division was meeting these requirements. These are the sequence of events leading to the current efforts of the Division of Nutritional Sciences to date.

## II. Resident Instruction

### A. Present Status

The Division presently has 40 active faculty participating in its program. The Division has taken an active role in resident instruction on our campus both at the undergraduate and graduate level. The Division presently has two 300-level and six 400-level courses listed in its curriculum. The Division appreciates that an interdisciplinary approach is essential to fulfilling our mission and goals in resident instruction. Therefore, the Division has attempted to coordinate our activities across various departmental lines. Several existing courses have been cross-listed with departments and the Division. The Division has always attempted to utilize existing courses for the training of our students as effectively as possible. The Division has also encouraged participating departments to discuss with the objective of minimizing duplications in teaching endeavors. Most of the instructional units generated by Nutritional Sciences courses are presently given to the primary instructors home department. This transfer of credit has been offered to encourage collaboration between individual departments and the Division.

In the fall of 1977, a new clinical nutrition course (MS450) was initiated to more closely link the Division with medical education. The development of this course has assisted the Division in attracting local physicians to participate in our programs. The Division presently has six physicians who are active members.

Faculty hold their primary appointment in the College of Agriculture, Applied Life Sciences, Engineering, Liberal Arts and Sciences or Medicine. Therefore, instruction offered by the Division is clearly interdisciplinary in nature. Presently, 45 graduate students are enrolled for advanced training in the Nutritional Sciences curriculum. Students educated in the Division do receive a thorough background in the basic sciences. There are some candidates applying to the Division that would prefer to develop their expertise in nutrition education or nutrition policies at the national and international level. To accommodate these students' needs, the Division is involved in serious discussions with various departments on the suitability of existing courses for this type of education. Various *ad hoc* committees have

been established to examine the instructional needs for students interested in pursuing nutrition careers in education or governmental policies, both nationally and internationally.

The ultimate value of food is realized only after it is consumed. Nutrition education is, thus, of high priority since the public must be provided information that will promote the interest in nutrition required to encourage good nutrition practices. Such service will also combat the spread of nutrition misinformation. The integration of sound nutrition practices into health delivery systems will also require continuing education of health professionals and the appreciation of nutrition as part of a preventative medicine health program. The Division will initiate activities to develop a concerted effort for health professionals, including physicians, dentists, nurses, physical therapists, dietitians and nutritionists, to be provided with extensive nutrition education training as part of their professional education. The need for additional courses in this area is at present being evaluated by a committee established by the Division that has members from the College of Agriculture, Education and Medicine.

The Division has also developed a committee to evaluate the needs for a specific course in current issues and policies in the Food Sciences and Nutrition. The committee has members from various areas of Food Science, Child Development, Foods and Nutrition, Agriculture Law and Agriculture Economics. Plans are presently underway to develop a course in this area in conjunction with other Departments and administrative units on our campus.

The Division also appreciates the potential benefits of computers in resident instruction. We are, therefore, initiating activities to utilize the PLATO and Apple II computing learning systems for instruction of our students. A state-wide question and answer program concerning nutrition information has recently been developed by the Division on the PLATO system.

Members of the Division firmly believe that there is a definite need to provide access to basic information on sound nutritional practices to all students on our campus. The Division has proposed the development of a Food Facts and Fads course to address the benefits, risks, misconception, etc. of the typical American diet. Activities are presently underway to develop such an undergraduate course in conjunction with various departments on our campus.

### III. Research

#### A. Current Status

In meeting the objectives of health and the avoidance of disease and the maintenance of a high quality of life for our nation's citizens, the following nutrition-related issues are considered to have high priority in the Division. Again, it must be emphasized that the that the Division has attempted to utilize the expertise of individuals on our campus. The objective of the Division is, therefore, to facilitate and foster, but not dictate research objectives by our faculty. Therefore, the research of the Division is aimed at increasing our understanding of the individual nutrient requirements for optimum health and development. In meeting this objective, precise determinations of nutritional status must be developed. Furthermore, the availability of these nutrients as influenced by agricultural practices, handling, food processing, cooking, and dietary habits must be adequately evaluated. As stated earlier, food

has its significance after it is consumed. Therefore, research must be continued to define the best techniques, methods and instruments to be utilized to ensure that adequate nutrition information is available for the public to make logical selections of foods to meet dietary requirements. The major research areas presently being pursued by the 40 faculty in the Division are:

- 1) Increasing the knowledge of human and animal requirements for nutrients necessary for optimal growth and well-being by determining the biological function of, requirements for and interrelations between, essential nutrients plus factors which influence nutrient requirements such as disease, environment, etc.
- 2) Improving our capabilities for assessing nutritional status.
- 3) Determining the nutrient composition of foods and the impact of agricultural practices, handling, food processing, and cooking on nutrient content.
- 4) Increasing our knowledge of factors affecting food preferences and habits plus evaluating the nutritional impact of various intervention strategies and public policies.
- 5) Improving techniques and instruments to guide consumers in selection of food and nutritionally adequate diets.
- 6) Evaluate methods of disseminating nutrition information.

## History of the Division of Nutritional Sciences, University of Illinois

1981-1993

Written by John W. Erdman, Jr.

### Summary of Events up to 1981

The University of Illinois, established in 1867, is known throughout the world for its numerous contributions to our understanding of nutrition for man and other animals. During the early years after the University was founded, the faculty and administration recognized that teaching and research in nutrition were essential if the University was to meet its mandates for public service to the citizens of Illinois. During the first century of the University's existence, various colleges, particularly the College of Agriculture, developed programs emphasizing nutrition of food-producing species. The university campus at Urbana-Champaign also became internationally known as a center for nutrition training and research during the 1920s and 1930s, primarily on the basis of its contributions to the knowledge of protein nutrition by members of the Departments of Chemistry (Division of Biochemistry) and Animal Science (Division of Animal Nutrition). Paralleling these developments, informal discussions were held periodically about coordinating and administering training in the nutritional sciences. Ultimately, a Nutritional Sciences Coordinating Committee of faculty and administrators prepared a proposal that was approved by the Graduate College Executive Committee on June 8, 1967, and by the Faculty Senate of the University on November 21, 1967. In giving its approval on December 2, 1968, for an MS and PhD degree program in Nutritional Sciences, the Illinois Board of Higher Education (IBHE) hailed the proposed program as a model for other interdisciplinary programs within the University. The Division of Nutritional Sciences, providing an administrative structure with a director to lead the program, was approved in 1981. During December of that year, the Division established an External Advisory Committee. This committee, composed of nine leaders of industry, academia, and government, meets yearly.

### I. The Decade of the 1980s

#### A. Expansion of Division Programs

During the early years of Milner's directorship, by-laws were adopted whereby faculty membership in the Division is conferred upon those who have demonstrated interests in nutritional sciences, are members of the Graduate College faculty, have been nominated for membership by members of the Division faculty and have received a majority vote from the faculty membership. Tenure is for five years and may be extended for an unlimited number of five-year periods as determined by votes of the Division faculty. The Division markedly expanded its numbers and diversity of faculty and students under the leadership of Director Milner. There were 22 faculty members in the Division in May 1980. By June 1981, the faculty had expanded to 33 and to 39 in 1983. The Division focused on recruitment of faculty from all areas of the campus and clinicians with faculty appointments outside the College of Agriculture but with a strong interest in nutrition research and training. By 1983, the faculty was composed of 26 from the College of Agriculture, 6 from Medicine, 1 from Applied Life Studies, 3 from Liberal Arts & Science, 2 from Engineering, and 1 from Veterinary Medicine. In 1986, a faculty member, Dr. Ralph A. Nelson, Professor of Clinical Sciences, was appointed Head of the Department of Internal Medicine of the College of Medicine at Urbana-Champaign and

Executive Head of the Departments of Medicine for all four sites of the University of Illinois College of Medicine in 1989. By the end of Dr. Milner's tenure as Director in 1989, there were 44 faculty appointed from 6 different UIUC Colleges (Agriculture, Applied Life Studies, Engineering, Medicine, Liberal Arts & Sciences, and Veterinary Medicine). Graduate student numbers increased from 29 in 1975 to 41 in 1981 and to 52 in 1989.

Milner's tenure was also marked by increased funding from within and outside of the campus. Dean John R. Campbell, of the College of Agriculture, provided funds on several occasions, and Dr. Robert M. Berdahl, Vice Chancellor for Academic Affairs, initiated provisional funds for the program from central administration. The Decatur Memorial Hospital funded research fellowships and visiting scholars for 4 years in the 1980s. Because of its strong interdisciplinary focus, the Division successfully obtained a highly competitive 5-year National Institute of Health training grant. From 1985-1990, this grant supported five predoctoral and two postdoctoral students.

## B. Development of a Joint PhD Program with University of Illinois at Chicago

Expansion of the activities of the Urbana-Champaign-based Division to the Chicago campus began in the late 1980s with the appointment of Professors Savitri K. Kamath and Phyllis E. Bowen of the Department of Nutrition and Medical Dietetics to faculty status in the Division. The collaboration gained momentum in 1988 from the efforts of Professor Kamath, at UIC and Professors J.A. Milner, M.F. Picciano and D.K. Layman at UIUC. Both campuses considered a joint PhD training program an exciting opportunity to foster collaboration between the highly clinically-based UIC unit in an urban setting with the strongly basic animal-focused research of the UIUC faculty. Drs. Judith S. Liebman and Karen R. Hitchcock, Vice Chancellors for Research and Deans of the Graduate Colleges at UIUC and UIC, respectively, embraced the joint PhD degree concept and facilitated its approval by the respective campuses. Development of initial guidelines for a joint PhD program between the two campuses was completed in June 1989, whereby candidates could complete their primary coursework and research experience at the Chicago campus but spend at least 1 year at UIUC. Students would be co-advised by faculty on each campus during their thesis research but the PhD degree would be awarded from UIUC. While refinement of the joint PhD program continued, Ms. Debra Sullivan enrolled as the first jointly trained student in 1990.

In October 1989, Director Milner resigned to accept the Headship of the Nutrition Department at Pennsylvania State University. W.R. Gomes, Dean of the College of Agriculture, appointed John W. Erdman, Jr. of the Department of Food Science to be Interim Director of the Division. The Division Executive Committee recommended the expansion of the funding support base before the search process for a new Director was begun. Dean Gomes and Judith S. Liebman, Dean of the Graduate College and Vice Chancellor for Research provided valuable advice and council during negotiations with College Deans and other campus officials which broadened campus financial support for the Division.

## II. The Decade of the 1990s

### A. Expansion of the Support Base for the Division

The 1980s witnessed diversification of the Division's activities well beyond its original College of Agriculture boundaries. Whereas Professor Visek, of the College of Medicine, was

the only faculty member with a primary appointment outside of the College of Agriculture to be a member of the Division in 1976, 43% of the faculty held primary appointments outside of Agriculture in 1989.

During the decade of the '80s funding support for the Division continued to be derived principally from the College of Agriculture, although Vice Chancellor for Academic Affairs Robert M. Berdahl, provided small amounts of program support for the Division on several occasions.

A landmark meeting, facilitated by Deans Liebman and Gomes, was held on January 4, 1990 to discuss infrastructure support for the Division. Present were the Division of Nutritional Sciences Executive Committee members, Deans J.S. Liebman, W.R. Gomes, M.J. Ellis (Applied Life Studies), C.C.C. O'Morchoe (Medicine), and V.E. Valli (Veterinary Medicine). As a result, the Colleges of Medicine, Veterinary Medicine, Applied Life Studies and Agriculture committed recurring funds to support Division activities for five years. Subsequently, Interim Director Erdman met with Dean L.E. Faulkner from the College of Liberal Arts & Sciences and received a 1 year commitment of funds for FY '91. In March 1990, Dr. Erdman and Deans Gomes and Liebman met with Vice Chancellor Berdahl and Associate Vice Chancellor Walter Tousey. A pledge was obtained for modest recurring campus funding for administration of the Division.

#### B. Development of the Margin of Excellence Program

The expanded funding base provided by the supporting Colleges and the campus to the Division made it possible to initiate a Margin of Excellence Program for supporting student training. Graduate Student Travel Support and Graduate Student Research Support Programs were begun in the fall of 1991 wherein students apply and compete for grants from each program. Travel support can be used by students to attend national meetings and to present their research results. Awards for research support are determined by a research proposal submitted by students. In the first two years of the program, 34 Nutritional Sciences graduate students benefited from travel support and 18 benefited from research support.

#### C. Search for a New Director

A national search was conducted in 1990-91 for a Director for the Division. Five candidates were interviewed by the search committee chaired by Associate Dean William George (College of Agriculture). Professor John W. Erdman, Jr. was appointed as Director of the Division by the Board of Trustees on May 9, 1991.

#### D. Other Activities

Since 1991 the Division has played a major role in the development of interdisciplinary programs. A collaborative research program was established with the Danville Veteran's Administration Medical Center, Danville, IL and the Functional Foods for Health Program which is a collaborative effort involving faculty from the UIC campus and the UIUC campus. With the leadership of Professor Milner and then Professor Erdman, a multidisciplinary team was chosen and funding was secured for an 18-week feeding study at the Danville facility. Professor Susan M. Potter, of the Division of Foods & Nutrition, was principal investigator of the project, which demonstrated that incorporation of foods containing soy protein into diets of mildly hypercholesterolemic men significantly reduced total serum and LDL cholesterol.

The Division provided leadership on behalf of several units on the UIUC campus in developing the Functional Foods for Health Program. Joint UIC/UIUC discussions began in the fall of 1990 to determine the extent of faculty interest from each campus for formalizing a research-based program focusing upon the health aspects of different foods and their components. A second annual retreat was held in May 1993 with 45 faculty members in attendance. A full-time Director had been hired and requests were sent to several dozen food and pharmaceutical companies inviting them to join an industrial affiliate program with the University.

Beginning in 1992, a Division committee, under the leadership of Professor George C. Fahey (Animal Sciences) evaluated the training of nutrition graduate students on the UIUC campus. The committee recommended major changes in a number of Nutritional Sciences courses which are in the process of being implemented.

#### E. Celebration of the 25 Years of the Program.

This year, 1993, marks the 25th Anniversary of IBHE approval of the program which now provides graduate training for students of the Urbana-Champaign and Chicago campuses. More than 45 faculty from six colleges (Agriculture, Applied Life Studies, Engineering, Medicine, Liberal Arts & Sciences, and Veterinary Medicine) on the Urbana-Champaign campus and one college (Associated Health Professions) on the Chicago campus direct graduate education in the broad field of Nutritional Sciences.

On September 30, 1993, a banquet was held to commemorate the 25th anniversary year of the approval of the Nutritional Sciences program by the IBHE. Over 100 faculty, students, administrators and guests celebrated the silver anniversary. President Stanley Ikenberry presented the keynote address noting that the Division of Nutritional Sciences is a prototypical interdisciplinary graduate research and training program and was well ahead of its time in such training. Both Harold Draper (Professor Emeritus, University of Guelph) and John Milner (Head, Nutrition Department, Pennsylvania State University) returned for the banquet and addressed the group. Others in attendance included former Deans Orville Bentley, Dan Alpert, and Judith Liebman who played key roles in the development of the Division and current Deans W.R. Gomes, College of Agriculture; C.C.C. O'Morchoe, College of Medicine; M.J. Ellis, College of Applied Life Studies; and V.E. Valli, College of Veterinary Medicine.

During this past quarter century, a total of 203 Masters and Doctoral degrees had been conferred. Six were conferred upon students who had also earned the MD degree. Currently, there are 47 faculty and 52 students in the program.