



# Nutritional Sciences News

Division of Nutritional Sciences University of Illinois at Urbana-Champaign

VOLUME 2 NUMBER 1 WINTER 1989

## A Word from the Editor

Nutritional Sciences is a dynamic field, and likewise ours is a dynamic Division. Each year brings many changes among us. We will try to keep you up-to-date with what's going on in Nutritional Sciences at the U. of I. Please keep us informed of your professional activities. Thank you to all the faculty, students, and alumni who contributed to this issue.

Sincerely,

Karen D. Dotson

## A Word from the Interim Director

In September, Dr. W. R. Gomes, Dean of the College of Agriculture, appointed me as Interim Director of the Division of Nutritional Sciences for the 1989-1990 academic year. The Executive Committee of the Division and I are working with the campus administration to upgrade financial support for the Division. We hope to be able to carry out a nationwide search for a new director in the near future.

John Milner and Mary Frances Picciano will be sorely missed by us all. John left the Division at its peak in terms of numbers and quality of students, faculty, and programs. For

that we are all indebted to him. There is no doubt that the Division will continue to prosper due to the dedicated participation of students, faculty, and alumni. We urge you to keep in touch with us.

Sincerely,

John W. Erdman, Jr.

## A Word from the Former Director

It is difficult for me to believe it has been fourteen years since I became a faculty member of the University of Illinois and eight years since I was appointed Director of the Division. As I leave the campus and turn over the reigns of the Division to the capable hands of Dr. Erdman, I am overjoyed to have been a part of this outstanding Nutrition program. My heart-felt thanks goes to the many associates that made my time at Illinois such a rewarding experience. I look forward to hearing about the future accomplishments of the Division, its faculty and its students.

Sincerely,

John A. Milner

## Guests Present Seminars in Nutrition

This past year eight scientists visited the Division and presented seminars to NS faculty and students. Dr. Gary Beauchamp, from Monell Chemical Senses Center in Philadelphia, spoke on "The Development and Modification of Salt Taste Preference in Humans." "New Perspectives on Diet and Cancer" was the title of a lecture given by Dr. Michael Pariza of the University of Wisconsin. Dr. David Booth, from the University of Birmingham, England, presented a seminar entitled "The Control of Food Intake." Dr. William Pardridge of UCLA lectured on "Amino Acid Transport Through the Blood-Brain Barrier." "Nutritional Support of the Hospitalized Patient" was the topic of a seminar presented by Dr. Bruce Bistran of New England Deaconess Hospital in Boston. Dr. Janet Greger of the University of Wisconsin, Madison, presented a lecture entitled "Inorganic Anions: The Forgotten Elements in Discussion of Mineral Bioavailability." "Lipid Lowering Properties of Soybean Protein" was the topic of a seminar presented by Dr. Karen Chapman, a U. of I. alumnus, from the Danville Veterans Hospital. Dr. Robert Cousins of the University of Florida, Gainesville, presented a seminar on the "Molecular Basis of Zinc Absorption and Metabolism."

## *PBS Documentary Covers NS Research*

The Public Broadcasting Service program "Discover: The World of Science" will air a documentary this fall/winter highlighting U. of I. research on the metabolism of the black bear. Dr. Ralph Nelson and his graduate students are endeavoring to isolate and purify substances which are unique to the black bear during its denning period. According to graduate student Patricia Miers, identifying such metabolites may elucidate new metabolic pathways and give further information on how the bear is able to successfully starve for four to six months while maintaining its body temperature and metabolic rate.

## *NS Graduate Student Association Co-Sponsors Seminar*

In March the Nutritional Sciences Graduate Student Association co-sponsored a nutrition seminar with McKinley Health Center on "Nutrition and Your Health." The seminar was part of a series aimed at University of Illinois students. Three graduate students from the Division presented short talks and answered questions from the audience: Keith Garleb spoke on fiber, Ann Ching talked about cholesterol, and Wendy Markham spoke on exercise.

## *Nutritional Sciences Faculty Give International Lectures*

Dr. Robert Easter presented lectures on swine nutrition to swine managers in China's Jilian Province and to scientists and nutritionists at the Shanghai Academy of Sciences in the People's Republic of China. He presented an invited paper on "Acidification of Pig Diets" at the University of Nottingham Feed Manufacturers' Conference in the United Kingdom. Dr. Easter presented "Implications of Porcine

Somatotropin for Swine Nutrition" at the Western Nutrition Conference in Winnipeg, Manitoba, and "Beta-adrenergic Agonists and PST in Swine Nutrition" at the annual meeting of the Mexican Association for Swine Nutrition in Mexico City.

Dr. John Erdman spoke at the ILSI/Nutrition Foundation Food Safety and Nutrition Conference in the Bahamas. He also presented "Phytic Acid Interactions with Divalent Cations in Foods and in the Gastrointestinal Tract" at the ACS symposium on "Mineral Absorption in the Monogastric G.I. Tract" in Toronto, Ontario, Canada.

Dr. Elizabeth Jeffery made a presentation at the Second Sulfur Xenobiochemistry Symposium at the University of London, Chelsea, London.

Dr. Richard Magin participated in the Yugoslav Symposium on Biophysics in Sarajevo, Yugoslavia, with "In Vivo Localized ESR Spectroscopy." He also participated in the annual meeting of the Society of Magnetic Resonance in Medicine in Amsterdam, The Netherlands, with "Improving Tumor-To-Liver Contrast Using Dextran Magnetite," and with other papers.

Dr. Ralph Nelson was the keynote speaker at the Living In The Cold II meeting in LeHohwald, France. There he spoke on "Nitrogen Turnover and Its Conservation in Hibernation."

Dr. Mary Frances Picciano made presentations at the 4th International Meeting on Human Lactation in San Jose, Costa Rica. Her topics were "Influence of Parity and Length of Lactation on Milk Selenium Content of Undernourished Women" and "Impact of Supplemental Dietary Selenium in Lactating Women and Their Infants."

Dr. Harold Swartz made several international presentations this past year. He presented a lecture series on ESR in Biology at the Zhong Kai Agrotechnical College, Zongshan University and Zongshan Medical School in Guangzhou, Guangdong Province, China. At the Second International Symposium on Spin Trapping and Aminoxyl Radical Chemistry, held at the University of Guelph in Guelph, Ontario, Canada, he spoke on "Metabolism by Cells of Nitroxides and Spin Traps." "Measurements of Concentrations of ESR

for NMR" was the topic of a seminar Dr. Swartz presented to the Department of Chemistry at Oxford University, Oxford, England. He was also an invited lecturer on "Biomedical ESR" at the 8th Annual Society of Magnetic Resonance in Medicine, in Amsterdam, The Netherlands. At the International Workshop on In Vivo ESR and ESR Imaging, held at the University of L'Aquila, L'Aquila, Italy, Dr. Swartz presented "Measurements of Oxygen and Redox Metabolism in Microscopic Biological Systems by ESR." He was invited plenary lecturer on "ESR Imaging and In Vivo Spectroscopy Using Nitroxides" at the International Conference on Nitroxide Radicals held at the Academy of Sciences in Novosibirsk, USSR.

## *Faculty Make Many National Presentations*

Dr. David Baker presented "Phosphorus Nutrition of Swine and Poultry" at the Texasgulf Phosphorus Symposium in Raleigh, North Carolina. He gave a seminar to the Interdepartmental Nutrition Group at the University of Missouri, Columbia, on "Prerequisites for Research Excellence." Dr. Baker presented "New Applications of Amino Acids" at Degussa Technical Symposium in Indianapolis, Indiana. Furthermore, he presented "Biotechnology in the Animal Sciences" at the American Society of Animal Science (ASAS) in Lexington, Kentucky. He spoke on "New Developments in Amino Acid Nutrition" at Monsanto Company in St. Louis, Missouri this September.

Dr. Jimmy Clark gave several guest lectures and conference presentations this year. He spoke to the Ralston Purina International Scientific Board in St. Louis, Missouri on "Increasing Energy Intake by Dairy Cows." He participated in the U. of I. College of Veterinary Medicine Fall Conference by speaking on "New Developments in Dairy Ration Formulation for Protein." He presented "Dairy Cow's Response to Abomasally Available Nutrients" to the American Feed Industry Association in Kansas City, Missouri. At the Southwest Nutrition and Manage-

ment Conference in Tempe, Arizona, Dr. Clark spoke on "Influence of Starch and Amino Acids Reaching the Small Intestine on Animal Productivity - Dairy Cattle." He also lectured on "Effects of Source of Energy and Protein on Nutrient Passage to the Small Intestine of Dairy Cows" at the Ajinomoto Company Research Conference in Syracuse, New York.

Dr. Robert Easter presented an invited paper on vitamin nutrition at the Symposium on Nutrition of the Sow During Gestation at the 1988 Annual Meeting of ASAS; at the Southern Section ASAS Symposium on The Challenges for Lean Meat Production, in New Orleans, he presented "Nutritional Requirements of Pigs Treated with PST." Dr. Easter spoke on "Implications of Porcine Somatotrophin for Swine Production" at the American Feed Industry Nutrition Symposium in Kansas City, and on "Growth Management for Optimum Appeal of Pork" at the 25th Annual Georgia Nutrition Conference in Atlanta.

Dr. John Erdman was chosen as the Distinguished Phi Tau Sigma lecturer at the Department of Food Science, North Carolina State University, in Raleigh. He presented papers at the Institute of Food Technologists meeting, the FASEB annual meeting, and the meeting of the Acoustical Society of America.

Dr. George Fahey, Jr. delivered many guest lectures this year. These included visits to Ohio State University in Columbus; the Distillers Feed Research Conference in Cincinnati, Ohio; the University of Missouri, Columbia; and Farmland Industries in Madison, Wisconsin. Dr. Fahey delivered the Thornton lecture at Texas Tech University in Lubbock, Texas in April, and in May he gave the Pfizer lecture in Kansas City, Missouri. He also spoke at the August ASAS-ADSA Symposium.

Dr. Elizabeth Jeffery was guest lecturer for the University of Illinois at Chicago Department of Pharmacology and also at the University of Minnesota at Minneapolis. Additionally, she made presentations at the Society of Toxicology conference.

Dr. Li Li Ji presented papers this year at FASEB, the American College of Sportsmedicine Conference, and the Equine Nutrition and Physiology Symposium.

Dr. Jim Kaput was a speaker in the Genetic Engineering Seminar Series held in November at the University of Illinois.

Dr. Richard Magin participated in the annual meeting of the Society of Magnetic Resonance in Medicine in San Francisco, in the IEEE Ultrasonics Symposium in Chicago, and in the annual meeting of the IEEE/EMBS in New Orleans.

Dr. John Milner spoke at the University of Iowa on "Dietary Selenium as a Modifier of Carcinogenesis," and at Oregon State University on "Selenium and Carcinogenesis." Dr. Milner also spoke in Champaign, Illinois at the Bean Booster Training Session. His topics at the session were: "Hydrogenated Soybean Oil: Is It Really Healthier?"; "What About Omega-3 Fatty Acids and Iron - Can Soybeans Make the Grade?"; and "Polyunsaturated/Monounsaturated Ratios: How to Explain the Difference Between Oils."

Dr. Ralph Nelson presented a lecture on "How to Write a Diet Prescription" at Iroquois Memorial Hospital. He spoke on "Diet Prescription for Athletes" during the Prairie State Games Seminars in Champaign, Illinois, and on "Nutrition and the Athlete" at Carle Hospital's Sports Medicine Seminar, also in Champaign.

Dr. Jan Novakofski made two presentations at the National Feed Ingredients Association. The topics were "An Overview of Muscle Growth and Protein Synthesis" and "An Overview of Adipose Growth and Metabolism."

Dr. Mary Frances Picciano gave several national presentations. She spoke at the National Institute of Child Health and Human Development Workshop on "Future Needs for Human Milk Research" held in Washington, D.C.: her topic was "Evidence for Increased Nutrient Requirements During Lactation: Human and Animal Studies." She presented "Folate Nutrition in Infancy" at the ACS Symposium "Folic Acid: Biochemical, Physiological, and Nutritional Aspects" in Los Angeles. Dr. Picciano spoke on "Insuring Adequate Nutrition for Infants and Children: The Role of the Dietitian" at the annual meeting of the Nebraska Dietetic Association,

held at the University of Nebraska in Lincoln. "Trace Elements, Growth, and Cognitive Development in Children" was the topic of her presentation at the Cook County Graduate School of Medicine Symposium on "Advances in Pediatrics, 1989", held in Chicago.

Dr. Abigail Salyers has given numerous lectures this year. At the Vahouny Dietary Fiber Conference in Washington, D.C. she presented "Activities of Polysaccharide-Degrading Bacteria in the Human Colon." She was the keynote speaker at the Southeastern Physiology and Genetics Conference in Maggie Valley, North Carolina. Dr. Salyers presented seminars at Ohio State University in Columbus and at NutraSweet Company in Chicago. She spoke at the American Chemical Society Symposium on Dietary Fiber at the ACS meeting in Dallas, and at the American Society of Microbiology Symposium on Genetics and Molecular Biology of Anaerobes during the ASM meeting in New Orleans.

Dr. Shelly Schmidt was guest lecturer at the Seymour G. Gilbert Mini-Symposium on Water Relations at Rutgers University in New Brunswick, New Jersey, where she spoke on "Water Mobility Studies by Pulsed NMR." She participated in the presentation of "Determination of Sodium Binding in Hydrocolloids by <sup>23</sup>Na Nuclear Magnetic Resonance" at Purdue University in West Lafayette, Indiana. At the Bi-Annual ACS Meeting in Los Angeles, Symposium on Food and Agricultural Applications of NMR, Dr. Schmidt presented "Characterization of Water in Foods by NMR." At the Dallas meeting of ACS, Symposium on Water Relationships in Foods, she presented "Use of NMR Spectroscopy and Microscopy to Study Water Relations in Foods."

Dr. Harold Swartz spoke on "The Use of EPR Imaging to Study Redox Metabolism in Viable Biological Systems" at the Gordon Research Conference on Magnetic Resonance in Biology and Medicine held in Tilton, New Hampshire. At Duke University in Durham, North Carolina, Dr. Swartz spoke to the Department of Chemistry on "Measurement of Oxygen Concentrations by ESR Techniques Including ESR Imaging." He presented a lecture entitled "EPR Imaging" to the Baltimore-Washing-

ton ESR Discussion Group meeting at the Johns Hopkins Medical Institutions in Baltimore, Maryland. At Brown University in Providence, Rhode Island, Dr. Swartz spoke on "Measurement of Oxygen Concentrations by ESR." He was Chair of the symposium "The Use of ESR to Study Reactive Species in Biological Systems" at the Rocky Mountain EPR Conference in Denver, Colorado.

Dr. Willard Visek presented several lectures across the country. He spoke at the Conference on Nutrition and Aging held at the University of Texas Medical Branch at Galveston. He lectured as a Visiting Professor in Nutrition at Buffalo, New York and at Wayne State University in Ohio. Dr. Visek spoke at the 1988 Food, Agriculture, and Nutrition Forum "A Healthy Diet with Animal Product Options" held at the University of Minnesota. He also took part in the North Carolina State University Nutrition Program Seminar Series, in Raleigh, North Carolina.

Dr. Matthew Wallig presented "The Persistent Effect of 1-Cyano-2-Hydroxy-3-Butene (CHB) on Pancreatic Glutathione (GSH) Levels" at the Society of Toxicology meeting in Atlanta. He also participated in presentations made at the annual meeting of the American Association for Cancer Research in San Francisco.

### *Five Faculty Members Receive New NIH Grants*

Drs. Elizabeth Jeffery and Matthew Wallig were awarded a 3-year grant from the NIH National Institute for Diabetes, Digestive and Kidney Diseases as co-principal investigators studying cyanohydroxybutene toxicity and glutathione. Dr. John Milner received an NIH grant to study the effect of dietary selenium on the initiation of DMBA carcinogenesis. Dr. Abigail Salyers received a 5-year renewal of her NIH grant to study polysaccharide utilization by human colonic Bacteroides. Dr. Harold Swartz received a NIH Small Instrumentation Biomedical Research Support Grant and a NIH Illinois Electron Spin Resonance Center Grant as co-principal investigator with two other UIUC researchers.

### *Other Major Grants*

Drs. John Erdman and George Fahey, Jr. were University of Illinois recipients of a 2-year USDA Competitive Grant in Human Nutrition entitled "Evaluation of the Preruminant Calf as a Model for Study of  $\beta$ -carotene Absorption."

Dr. Elizabeth Jeffery is Co-Principal Investigator of a study on "Assessment of the Impact of Byproducts of Hazardous Waste on Man and His Environment" being funded by the U.S. Geological Survey/Water Resource Center.

Dr. Li Li Ji has received a two-year grant from the American Heart Association, and a 1989 Biomedical Research Grant from UIUC.

Dr. John Milner received a grant from Carle Foundation Hospital to study "Comparative Effects of Selenium on Neoplastic and Non-Neoplastic Human Mammary Cells."

For "Metabolic and Behavioral Adaptations for Extended Fasting in Polar Bears" Dr. Ralph Nelson received a National Science Foundation Arctic Award. From CSRS he received a grant for "Use of Infrared Thermography to Quantitate Heat Loss in Humans."

Together Drs. Bechtel, Novakofski, and O'Brien have received a grant through the Pork Producers of Illinois to evaluate the ultrasonic grading of meat. Drs. Novakofski and O'Brien have also received a grant for "Acoustic Evaluation of Meat Quality" from the National Livestock and Meat Board.

Dr. James Robinson has been awarded a two-year competitive USDA grant for "Embryonic Consequences of the Bovine Deficiency of UMP Synthase."

Dr. Shelly Schmidt has received a Biomedical Research Support Grant from the University of Illinois for her study of "Characterization of Sodium Binding in Model Food Systems Determined By Sodium-23 NMR Spectroscopy."

Dr. Harold Swartz has received a grant from the GELB Foundation for Research on Melanin for collaborative research with the ESR Center, Medical College of Wisconsin and Jagiellonian University of Krakow, Poland. Dr. Swartz has received a 3-year National Science Foundation

grant for an Interdisciplinary Bioengineering Pilot Study for Collaborative Research, along with another UIUC professor.

Drs. Matthew Wallig and Elizabeth Jeffery have received HATCH funds from the Illinois Agricultural Experiment Station to pursue "Studies of the Pancreatotoxic Nitrile, 1-Cyano-2-Hydroxy-3-Butene."

Dr. Margaret Weigel has received a grant from the Beckman Foundation for "Epidemiologic Study of the Interrelationship Among Dietary Behavior, Nutritional Status, and Chronic Disease Risk Among the Hispanic Health and Nutrition Examination Survey (HHANES) Population." Also, she and Equadorian colleagues have received a grant from the Equador Ministry of Public Health to study the interaction of nutritional factors and altitude in risk for perinatal mortality, low birth weight, and prematurity.

### *Private Industry Supports Illinois Research*

Many of the Nutritional Sciences faculty are being supported in their research through grants from private industry. Dr. David Baker has a two-year contract with Ajinomoto Company, Inc. to study "Amino Acid Nutrition of Swine and Poultry." Dr. Baker has also received support this year from Englehard Chemical Company, Biokyowa, Inc., Ross Laboratories, and Moorman Manufacturing Company.

Dr. Jimmy Clark has received a grant from Rhone Poulenc to study "Effects of BST and Postruminal Infusion of Methionine and Lysine on Performance of Dairy Cows." Ralston Purina International is supporting Dr. Clark's investigation of "Effects of Feeding to Lactating Cows Degradable and Nondegradable Protein Supplements at Two Levels of Crude Protein Intake."

Dr. Robert Easter has received research support this year from NOVO Corp., Illinois Foundation Seeds, Heartland Lysine Inc., Eli Lilly Company, and Nutrabasics Company.

Dr. George Fahey, Jr. holds a grant from DuPont to study "Alkaline

Hydrogen Peroxide-Treated Lignocellulose Utilization by Beef Cattle and Dairy Cattle."

Biotechnology Research and Development Corporation has awarded Dr. Richard Magin support for development of fiber optic-based sensors for monitoring fermentation processes.

Dr. Matthew Wallig is the principal investigator of "Toxicities of Naturally-Occurring Nitriles and the Relationships of Toxicity to Glutathione," which is being supported by the Pharmaceutical Manufacturer's Association Foundation, Inc.

### *Faculty Awards and Honors for 1988-1989*

Dr. Robert Burr was elected as a Fellow of the American College of Nutrition.

Dr. Donald Layman was named to the University of Illinois Incomplete List of Outstanding Teachers.

### *Nishida Receives Funk Award*

Dr. Toshiro Nishida was a 1989 recipient of the Paul A. Funk Recognition Award in honor of his contributions to the study of lipids and lipoproteins. The Funk Award recognizes faculty in the College of Agriculture who have shown high achievement in the field of agriculture.

### *O'Brien Is Awarded*

Dr. William O'Brien, Jr. was recently selected the 1988/1989 Outstanding Branch Counsellor of IEEE, the Professional Electrical Engineering Society with a membership of over 300,000. He was nominated for this award by the students of the University of Illinois Branch of IEEE.

### *Visek Named University Scholar*

In 1988 Dr. Willard Visek was named a University Scholar by the University of Illinois. The University Scholars program recognizes faculty excellence in many disciplines. Faculty from both the Urbana-Champaign and Chicago campuses may be nominated by their departments for this honor. It provides recipients with substantial monetary awards in support of their research. The program is funded entirely by private gifts, and is intended to encourage the recruitment and retention of prominent faculty at the University of Illinois.

### *Wallig Receives Award*

The Pharmaceutical Manufacturer's Association, Inc. awarded Dr. Matthew Wallig its 1989 Faculty Development Award in Toxicologic Pathology.

### *Professional Activities*

The leadership of the University of Illinois Nutritional Sciences faculty is evident by their involvement with many diverse professional organizations and publications.

### *Committee Participation*

A partial list of faculty involvement on national committees is as follows. Dr. Baker is an AIN Elected Councilor (1989-1992), member of the AIN Bioserv Award Committee, and participating member of the National Academy of Science (NRC) Subcommittee on Bioavailability of Nutrients in Foods and Feeds. Dr. Burr is a member of the Physician Advisory Panel, National Meat and Livestock Board. Dr. Clark participated on the Awards Committee of the American Dairy Science Association. Dr. Easter is Chair of the Midwest ASAS Teaching Section for 1989-1990. Dr. Erdman is a member of the IFT

Expert Panel of Food Safety and Nutrition and of the AIN Program Planning Committee. He is also Chair of the Nominating Committee for the AIN Borden Award in Nutrition. Dr. Fahey serves on the NRC Subcommittee on Feed Composition. Dr. Ji is a Review Committee Member for the American Heart Association of Illinois. Dr. Layman chairs the AIN Bioserv Award Nominating Committee and is a juror for the AIN Conrad A. Elvenhjem Award. Dr. Milner participates on a number of national committees, including: the NIH Nutrition Study Section (Chair), and Member of its Division of Research Grants, the Cancer Prevention Committee of the Illinois Division of the American Cancer Society, the AIN Council, and as Evaluation Panelist for the National Science Foundation National Research Council Graduate Fellowship in Biomedical Sciences. Most recently, Dr. Milner became a member of the USDA Dietary Guidelines Committee. Dr. Picciano serves on several committees, including: the Illinois Department of Public Health Nutritional Sciences Advisory Committee, the USDA Competitive Research Grants Review Panel, the AIN Program Planning Committee, the National Academy of Sciences Subcommittee on Nutrition During Lactation, and as the Delegate-at-Large for the American College of Nutrition. Dr. Salyers is a NSF Panel Member in Cellular Biochemistry. For 1989-1992, Dr. Siedler has been appointed to the Advisory Committee of the US AID Bean/Cowpea Collaborative Research Support Program (CRSP). Dr. Visek has a long list of current committee involvements. These include: National Dairy Council Nutrition Research Science Advisory Committee, LSRO Advisory Committee, the Scientific Steering Group of the FASEB Life Sciences Research Office, the USDA's Human Nutrition Board of Scientific Counselors, the American Society for Clinical Nutrition Medical/Dental/Residency Education Committee, and the AIN, ASCN, and ASPEN Representative to the Intersociety Committee on Ethics. Dr. Wallig is a member of and U. of I. representative to the High Erucic Acid Oil Marketing Subcommittee of the USDA-CSRS Office of Critical Materials.

## Editorial Boards

Many Nutritional Sciences faculty serve on the editorial boards of professional publications. An incomplete list includes: Dr. Baker - Animal Science, Nutrition Reviews (Associate Editor); Dr. Erdman - Journal of Nutrition, Plant Foods for Human Nutrition, Nutrition Research Newsletter, CRC Critical Reviews in Food Science and Nutrition; Dr. Fahey, Journal of Animal Science; Dr. Ji - reviewer, Medicine and Science in Sport and Exercise; Dr. Magin - Drug Delivery Systems, IEEE Transactions on Biomedical Engineering (Associate Editor); Dr. Milner - Nutrition Today; Dr. Novakofski - Journal of Animal Science; Dr. O'Brien - IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control (Editor-in-Chief); Dr. Picciano - Journal of Nutrition; Dr. Salyers - Applied and Environmental Microbiology, Applied Microbiology and Biotechnology.

## Other Faculty Involvements

Dr. Erdman recently co-edited a book entitled Nutrient Interactions, published in 1988 by Marcel Dekker, Inc. in New York.

Dr. Kaput is a reviewer for the Networks of Centres of Excellence Program of the Canadian Medical Research Council.

Dr. Layman is President of the Illinois Nutrition Association.

Dr. Magin was elected Chairman of the Bioengineering Faculty.

Dr. O'Brien serves as President of the American Institute of Ultrasound in Medicine.

Dr. Picciano co-edited the book Folic Acid: Biochemical, Physiological and Nutritional Aspects, published by Alan R. Liss, Inc. of New York in 1989.

Dr. Harold Swartz was elected President of the International Society of Electronic Spin Resonance/ Electron Paramagnetic Resonance and National Secretary of the Society of Magnetic Resonance in Medicine.

Dr. Visek was involved with the Kansas Board of Regents in reviewing the proposed Ph.D. Clinical Nutrition

Program at the University of Kansas, the established Ph.D. Nutrition Program at Kansas State University, and the possible collaboration of these programs. He participated in an NIH Site Visit for GCRC at the University of Wisconsin. Dr. Visek was also Chairman of the 1989 FASEB Summer Conference "Nutrients and Gene Expression in Carcinogenesis" held at Copper Mountain, Colorado.

## Visek to Edit Journal of Nutrition

Beginning in January, 1990, Dr. Willard Visek will assume responsibility as Editor-in-Chief of The Journal of Nutrition.

## Sabbatical Leaves

Dr. Peter Bechtel returned in July from a 10-month sabbatical leave at the Department of Medical Cell Genetics at the Medical Nobel Institute, Karolinska Institute in Stockholm, Sweden.

Dr. Richard Magin will be on sabbatical leave during 1989-1990 at the NMR Center of the University of Florida, Gainesville.

Dr. Harold Swartz spent a 12-month sabbatical leave at Johns Hopkins University in Baltimore, Maryland, and is presently continuing his sabbatical at Oxford University, Oxford, England for 6 months. In support of his work he has received an American Cancer Society Research Development Award, and American Cancer Society Scholar Grant, and a Fogarty Senior International Fellowship Award.

## Weigel Brings International Collaboration to Division

In October of 1988, Dr. M. Margaret Weigel became a member of the Division of Nutritional Sciences faculty. Dr. Weigel received her Ph.D. from UCLA in Biomedical An-

thropology and was a Postdoctoral Fellow at the Oregon Health Sciences University in Portland, Oregon, studying Behavioral Cardiology. In addition to her appointments at the University of Illinois, Dr. Weigel is also a faculty member at the Universidad Central del Ecuador - Quito and Hospital Gineco-Obstetrico Isidro Ayora, Quito. She has been collaborating with researchers in Quito, Ecuador for over four years.

Dr. Weigel's research interests are in maternal and child nutrition, community nutrition, and epidemiology. Specifically, she is studying the role of calcium and other cations in pregnancy-induced hypertension (PIH) risk and blood pressure control during pregnancy. Incidence of PIH in Equador is among the highest in the world; preliminary studies have shown that calcium carbonate supplementation reduces the incidence of the disorder.

Dr. Weigel spent June and July in Equador, along with U. of I. graduate student Marcia Monaco, working on current projects there. In August they travelled to Brazil to talk with faculty and students in Sao Paulo Province about establishing an interchange research/teaching program in the field of maternal and child health in community nutrition with universities there.

## Post-Doctoral Students

Randall Gretebeck is working with Drs. Boileau and Ji.

Evan Titgemeyer is working with Drs. Fahey and Schmidt.

## Graduate Student Honors and Awards

### Fellowships and Scholarships

Many of the Nutritional Sciences graduate students have been awarded for their excellence this year.

Several students have received grants as NIH/U.S. Public Health Services Predoctoral Trainees in Nutritional Sciences. Recipients include:

Lee Alekel, who is studying bone mineral metabolism, exercise, and calcium supplementation in perimenopausal women;

George Bark (reappointment), working on reduction of the toxic side effects of chemotherapy through nutrition;

Susan Johnson, who is studying the role of physiological feedback in control of food intake in young children;

Deborah Swartz, who is studying the effects of dietary fat on gene expression in the mammary gland; and

Greg Wibert, studying the regulation of protein metabolism by branched chain amino acids and exercise in catabolic conditions.

1989 Summer University Fellowships were received by NS students as follows:

Alexandra Adams, who is studying the use of infrared thermography to determine energy expenditure in infants;

Alyce Fly, working on iron bioavailability from fiber food sources.<sup>7</sup>

Other Nutritional Science students have received awards to support their graduate research:

Tim Elliot received a 1989 AIN Predoctoral Fellowship; his work involves nutrition and gene expression, specifically in mammary carcinogenesis.

Martha Funk was awarded a Proctor and Gamble Fellowship. She is studying the effect of diet type on methotrexate toxicity.

Sarah Jaw was awarded, for the third year, an Environmental Toxicology Scholarship from the Institute for Environmental Studies.

Hye Young Kim received a Hunter Fellowship from the U. of I. College of Agriculture; she is studying the effects of selenium on pulmonary tissue in infants.

Min Ma received a University Fellowship from the University of Illinois; her research emphasis is on macromolecular absorption in the neonate.

Wendy Markham also received a University Fellowship.

### *Excellence Award*

In September of 1988 Denise King was awarded the 1988 American Chemical Society Award for Excel-

lence in Graduate Research in Agricultural and Food Chemistry. She has been working with Dr. Barbara Klein on the effects of antioxidants on enzymatic lipid oxidation. Dr. King received a cash award and \$750 toward expenses to the ACS meeting in Los Angeles.

### *USDA Grant*

Chris Poor is working on a two year USDA grant to develop the pre-ruminant calf as a model for human carotenoid metabolism. He is working with Dr. John Erdman on the absorption and metabolism of carotenoids and vitamin A.

### *Summer Field Research Grant*

Marcia Monaco was awarded a summer field research grant from the Center for Latin American and Caribbean Studies. With the award she travelled to Ecuador for two months to collaborate on current projects being conducted by Dr. Margaret Weigel and Equadorian scientists. Their studies focus on maternal and infant health and nutrition. Ms. Monaco also travelled with Dr. Weigel to Brazil, where they made contacts for future joint projects between the U. of I. and the universities and government of Sao Paulo, Brazil. This endeavor was sponsored by Partners of America.

## *Student Presentations*

### *FASEB*

Twelve Nutritional Sciences graduate students made presentations at the 1989 Annual Meeting of the Federation of American Societies for Experimental Biology held in New Orleans in March. The presentations were as follows:

Alexandra Adams: Use of Infrared Thermography to Determine Neonatal Energy Expenditure.

Tim Elliott: Effects of Orotic Acid Feeding on Carcinogenesis.

Martha Funk: Effect of Adaptation to Semipurified and Purified Diets on Methotrexate Toxicity.

KyungHee Hwang: Influence of Plating Density and Selenium Concentration on the Uptake and Intracellular Distribution of Selenium in Mammary Cells.

Matt Kuchan: Intracellular Glutathione and Selenite Toxicity in Canine Mammary Cells in Culture.

Connie Krashoc: Quantitation of Energy Expenditure Through Direct Measurement of Heat Loss in Critically Ill Adults Using Infrared Thermography.

Jinzhou Liu: Effects of Garlic on the Formation of N-nitrosoproline in Humans.

Gongjin Luo: Influence of Dietary Fat on Tissue Peroxidation in Rats Fed a Diet Adequate or Deficient in Selenium.

Robert Miller: Lymphocyte Proliferation and Polymorphonuclear Leukocyte Phagocytic Function in Dormant-Fasted and Nondormant-Fed Black Bears.

Janet Novotny: Interaction of Selenium and Ascorbic Acid on the Growth of Canine Mammary Tumors.

Greg Wibert: Effects of Post Exercise Leucine Supplementation on Skeletal Muscle Protein Synthesis.

### *Society of Toxicology*

Sarah Jaw presented a paper entitled "The Role of Metallothionein in Biliary Metal Excretion" at the 28th Annual Meeting of the Society of Toxicology in Atlanta in February.

### *Institute of Food Technologists*

Denise King presented "Influence of Phenolic Content of Plant Extracts on Soybean Lipoxigenase-1 Activity" at the annual IFT meeting in Chicago in June.

### *American Association for Cancer Research*

Matt Kuchan presented a poster entitled "Influence of 1-cyano-2-hydroxy-3-butene (CHB) and Selenium on the Growth of Neoplastic Canine Mammary Cells in vitro" at the meeting of the American Association for Cancer Research in San Francisco in June.

### *International Congress of Nutrition*

Two University of Illinois students presented posters at the 14th International Congress of Nutrition, held in August in Seoul, South Korea:

KyungHee Hwang presented "Intracellular Selenium and Macromolecular Biosynthesis in Mammary Cells."



Hye Young Kim presented "Effect of Selenium Nutrition on Pulmonary Oxygen Toxicity in Neonatal Rats."

### *Miscellaneous Presentations*

Connie Krashoc presented lectures to Parkland College respiratory therapy students on "Respiratory Nutrition and the Ventilator-Dependent Patient," and to medical students at Carle Clinic on "Translation of the Prudent Diet Prescription."

## *Alumni News*

### 1969

Mary Jacob (Ph.D.) was elected to membership of the American Institute of Nutrition.

### 1970

Mathew M. Madappally (Ph.D.) is currently Director of Research and Development at Sigma Diagnostics Division of Sigma Chemical Company in St. Louis, Missouri.

Philip G. Reeves (Ph.D.) is a supervisory research chemist at the USDA/ARS Human Nutrition Research Center at Grand Forks, North Dakota. He has been elected to the Society of Experimental Biology in Medicine.

Yu-Yan Yeh (Ph.D.) is an associate professor in the Nutrition Department at The Pennsylvania State University, in University Park, Pennsylvania.

### 1971

Melvin T. Yokoyama (Ph.D.), professor in the Department of Animal Science at Michigan State University, is the graduate coordinator for the Department. He has also been elected to Phi Beta Delta, the National Honor Society for International Scholars.

### 1973

Roger W. Mellenberger (Ph.D.) is a professor and dairy extension specialist in the Department of Animal Science at Michigan State University. He is serving on the University Undergraduate General Education Committee, the ADSA West Agro Selection Committee, National Mastitis Council committees; also he was elected to a three-

year term as secretary of the Michigan Dairy Memorial Scholarship Foundation. In 1988 he received the Cooperative Extension Service Equal Opportunity Award. He participated in workshops on mastitis with the Quebec Farmer's Association. In 1989 Dr. Mellenberger presented an invited paper at the NMC meeting in Tampa.

### 1974

Gustav Graff (Ph.D.) is a research associate in molecular biochemistry with A.H. Robins Company in Richmond, Virginia. He is on the Editorial Advisory Board of Chemistry and Physics of Lipids, and is a member of the Federation of American Societies for Experimental Biology.

### 1975

Frank H. Morris (M.S.) is working with indigent and chemically-dependent persons and in prisons through volunteer agencies.

Kailash Mathur (Ph.D.) is a Professor of Nutrition at South Carolina State College in Orangeburg, S.C. He is an alternate trustee on the Southeast Consortium for International Development Board of Directors, and is also serving as a delegate on the NASULGC (National Association of State Universities and Land Grant Colleges) Division of International Affairs. Additionally, Dr. Mathur is serving as Chairman of the World Community Service - Rotary Club of Orangeburg, S.C.

Bruce A. Molitoris (M.S.) is an associate professor in the Department of Medicine at the University of Colorado Medical Center. There he is a member of the Faculty Senate, and is the Medical Center Representative to the American Federation for Clinical Research. He received the Clinical Investigator Award, from the Western Society of Clinical Investigation. He and his wife Karen have three children: Jason, age 7, Jared, age 5, and Julie, age 3.

### 1976

Florian L. Cerklewski (Ph.D.) is spending April to October of this year on sabbatical leave as a visiting associate professor at Johns Hopkins University School of Medicine, Baltimore, Maryland, in the Depart-

ment of Pharmacology and Molecular Science. This spring he made an oral presentation at the 23rd Annual Conference on Trace Substances in Environmental Health. He has also received continuation until 11/91 of a research grant from the National Institute of Dental Research.

Guy H. Johnson (Ph.D.) is Director of Infant Nutrition with Gerber Products Company in Fremont, Michigan. He is chairman of the ILSI-NF Diet and Hypertension Committee, and is a member of the American Academy of Pediatrics Committee on Nutrition. He has newly become a member of AIN and ASCN. He and his wife had their first child in August.

Kathleen M. Koehler (Ph.D.) is spending the spring and fall of this year on sabbatical at the University of New Mexico Medical School as a research assistant professor in the Department of Pathology. She is working with Dr. Philip Garry of the Clinical Nutrition Lab on a longitudinal study of nutrition and the elderly. Additionally, she has been elected to the nominating committee of the Society for Nutrition Education for the 1989-1990 term.

### 1978

Patricia G. Weston (Ph.D.) is working as a research specialist at the College of Veterinary Medicine at the University of Illinois.

Steven K. Clinton (Ph.D.) is a clinical fellow in medical oncology at Dana Farber Cancer Institute at Harvard University. He is a member of the American Institute of Nutrition, the American Association of Cancer Research, and the American Federation of Clinical Research. Dr. Clinton is working part-time at the USDA-Human Nutrition Research Center on Aging at Tufts University; there he is investigating the effects of lipids on the production of cytokines in the vascular wall which may mediate the development of atherosclerotic lesions. He continues to collaborate with Dr. Willard Visek of the U. of I. on various nutrition-cancer studies.

### 1979

Daniel M. Schaefer (Ph.D.) continues to enjoy his work as associate professor in the Meat and Animal Science Department at the University of Wisconsin-Madison.



1981

Thomas E. Edes (M.S., M.D.) continues to work as assistant professor in the Department of Medicine at the University of Missouri in Columbia and is the Associate Chief of Staff for Education at the Harry S. Truman Veterans Hospital in Columbia.

1982

Gilbert A. Boissoneault (Ph.D.) is assistant professor in the Department of Clinical Sciences, Division of Clinical Nutrition, at the University of Kentucky at Lexington, Kentucky. He is a member of the American Institute of Nutrition. His daughter Simone Travis was born April 23, 1988.

Rebecca Loomis (M.S.) is presently chief resident in the Department of Family Medicine at East Carolina University, Greenville, North Carolina.

Lisa Marshall (Ph.D.) continues as principal scientist in the Biochemistry Unit of the Division of Immunopharmacology with Wyeth-Ayest in Princeton, New Jersey. Her major responsibility there is conducting basic research and drug development in lipid and arachidonic acid metabolism. On November 18, 1988, she was married to Sean P. Gallagher.

1983

Kenneth A. Poirier (Ph.D.) is working as a life scientist with the US EPA at its Health Effects Research Laboratory in Cincinnati, Ohio. In September of 1988 he was named Chairperson of the Andrew W. Bridenbach Environmental Research Center's Electron Microscopy facility. In June of 1989 he presented an invited paper at the 23rd Annual Meeting of the Geochemical Society Symposium on Trace Substances in the Environment; the paper was entitled "Chlorine and Monochloramine Disinfection and Cardiovascular Disease."

Lisa A. Reich (M.S.) was promoted to product manager for the USCI Angiographic Systems Division of C.R. Bard, Inc. in Tewksbury, Massachusetts.

Eric O. Young (M.S.) was promoted to the position of nutritionist with ALPO Petfoods of Lehigh Valley, Pennsylvania, where his

efforts are concentrated on feline nutrition.

1984

JoAnn L. Daehler-Miller (M.S.) recently passed the examination for American Dietetics Association Registration. She continues to work as regional nutritionist with the Illinois Department of Public Health in Champaign, Illinois. She was elected to the Nominating Committee of the Eastern Illinois Dietetic Association (EIDA) for 1988-89, and is co-editor of the EIDA Newsletter. Mrs. Daehler-Miller is chair of the Nominating Committee and Member of the Executive Committee for the Foods and Nutrition Section of the Illinois Public Health Association (IPHA), is the representative to the Nutrition Coalition in Illinois for the IPHA Foods and Nutrition Section, and is a member of the Continuing Education Committee of the IPHA.

Glen A. Greeder (M.S.) is an internist with Kaiser Permanente P C in Portland, Oregon.

Michael Keenan (Ph.D.) continues as assistant professor in Human Nutrition and Foods at Louisiana State University in Baton Rouge, Louisiana. He received a grant this year from Ethyl Corporation to study the effect of the feed component Ethaeal (Zeolite A) on vitamin D-depleted, -repleted, and -adequate rats. He and his wife Donna have a son, Christopher Michael, born January 24, 1989.

Barbara Kochanowski (Ph.D.) is currently group leader in the GI Physiology Department of Proctor and Gamble Company in Cincinnati, Ohio. She is responsible for coordinating the Proctor and Gamble Student Award Program for the FASEB Annual Meeting. She was recently elected to membership in the American Institute of Nutrition.

Carolyn Spriggs Muchna (M.S.) continues to work as a part-time nutritional consultant. Her second child, Amy Elizabeth, was born on December 15, 1988.

1985

Sharon Marshall Hoerr (Ph.D.) is assistant professor in Community Nutrition with the Department of Food Science and Human Nutrition at Michigan State University. She received the Victor Hawthorne New

Investigators Research Award in Public Health for work on "Predictors of Food Bank Use in Single Mothers."

Laura M. Rosch (M.S.) is a fourth year medical student at Chicago Osteopathic. In 1989 she received a scholarship from the Association of Osteopathic Physicians and Surgeons.

1986

Kathryn Knosher Harden (Ph.D.) is now assistant editor of the Journal of Nutrition, under Dr. Willard Visek at UIUC.

Chris Hatlestad (M.S.) is a fourth year student at Southern Illinois Medical School in Carbondale. He is a member of the School of Medicine Committee for Nutrition Curriculum Review. He received an AMA scholarship in Clinical Nutrition to spend one month externship at the Mayo Clinic in Minnesota.

Anne M. Smith (Ph.D.) began a new position in September as assistant professor in the Department of Human Nutrition and Food Management at The Ohio State University in Columbus, Ohio. She has two daughters: Sarah, age 6, and Hannah, age 1.

1987

Karen McCauley Chapman (Ph.D.) works as a nutrition support dietician at the Veterans Administration Hospital in Danville, Illinois. She holds appointments in the Division of Nutritional Sciences and the College of Medicine at the University of Illinois. She is an associate member of AIN and ASCN.

Yu-Tysr Li (M.S.) is a Ph.D. candidate in Food Science at Cornell University in Ithaca, New York. In July of 1988 she married Yin-Liang Hsieh, also a graduate student in Food Science at Cornell.

Nancy J. Moriarity (Ph.D.) is chair of the Publicity Committee for the 1990 American Oil Chemists' Society Annual Meeting; she works at the Eastern Regional Research Center of the USDA in Philadelphia.

Frances T. Yen (Ph.D.) has a new position as junior faculty member in the Department of Physiology at Louisiana State University Medical Center in New Orleans, Louisiana.

1988

Kevin L. Fritsche (Ph.D.) continues as an assistant professor in the Animal Sciences Department at the University of Missouri in Columbia. This year he was elected as an associate member of AIN and obtained a grant through the Missouri Research Assistance Act. "It's small," he writes, "but it's a start." At the 1988 annual meeting of the American Oil Chemists' Society, he received an award for "Outstanding Paper Presentation."

Nancy Goff O'Connell (M.S.) is working as a research assistant at the Mass Spectrometry Laboratory in the Department of Gastroenterology and Nutrition at the Children's Hospital Medical Center in Cincinnati, Ohio.

Melissa Hendrix Olken (M.D., Ph.D.) is house officer II physician in internal medicine at the University of Michigan Hospital in Ann Arbor, Michigan. Her first child, Alexander Edward, was born in September.

1989

Debbie O'Connor (M.S., Ph.D.) is assistant professor of Nutrition in the Division of Applied Human Nutrition at the University of Guelph in Guelph, Ontario, Canada. Her first child, Bridget Emily, was born in October.

## *Has Your Life Changed?*

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## *Newsletter Information*

What's New in Your Life \_\_\_\_\_

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