

 NUTRITIONAL SCIENCES DEPARTMENT
NEWSLETTER
College of Agriculture & Life Sciences

GREETING FROM THE DEPARTMENT HEAD

As I review this newsletter for press, I find that we have achieved much. Undoubtedly, this reflects the positive attitude, resiliency and good old-fashioned hard work of our faculty, staff and students. We salute their accomplishments.

Since we last talked, we have defined two signature research areas that describe our translational research focus: "Bioactive Compounds, Nutrients and Lifestyle: Relationships to Cancer" and "Metabolic and Behavioral Factors Influencing Body Composition." The term, "translational research" originally described a "bench to bedside" approach that connects basic science with clinical application. Our research encompasses not only this approach, but includes population and intervention studies that evaluate associated factors and assess changes in those factors on the health of individuals. Such studies are highlighted in our research feature in the exciting work of Dr. Scott Going. Our outreach feature describes as well the translation of such research into education programs that benefit our citizens through the efforts, our extension specialists and county extension faculty.

As 2008 draws to a close, it is with great sadness we remember Darrel Goll, Bill McCaughey and Jim Berry. These are those whose ethics and standards formed the basis for the excellence we currently enjoy, whose instruction and mentoring formed the bedrock of our superb instruction programs and whose tireless service stands as an example of what can be accomplished when we give more than we take. We remember as well the joy, pleasure and laughter they brought to our lives and give thanks. In this issue, we honor them with a special memorial tribute and we invite you to share in this tribute by making a generous contribution to our student scholarship funds. This is your opportunity to participate with us in the education of the next generation of nutritional scientists as the interests from these funds go directly to support our students.

Many who receive this newsletter assist our faculty, staff and students throughout the year. Thank you for all of your time and effort in support for our programs. I wish you all a wonderful holiday season and great New Year.



NEW GRANTS

Stealth Health: Youth Innovation, Mobile Technology, Online Social Networking and Informal Learning to Promote Physical Activity.

Principal Investigator: Scott Going; Co-Principal Investigator: Noboku Hongu
Funded by: U.S. Department of Agriculture

Mechanisms of IGF1-Mediated Rescue of Radiation-Induced Salivary Gland Dysfunction.

Principal Investigator: Kirsten Limesand; Co-Investigator: Randy Burd
Funded by: National Institutes of Health

Rational Design and Production of Drugs that Binds the PH Domain of AKT.

Principal Investigator: Emmanuelle Meuillet
Funded by: National Institutes of Health/National Cancer Institute (sub-contract)

Small Molecule Inhibitors of the TIAM-1 PH Domain Signaling.

Principal Investigator: Emmanuelle Meuillet (recipient, Moses Sylvester)
Funded by: National Cancer Institute Minority Supplement Award

Partners for Healthy Active Adolescents, Compañeros Para Adolescentes Activos y Sanos.

Principal Investigator: Jennifer Reeves; Co-Investigators: Scott Going and Vanessa Farrell
Funded by: Tucson Metropolitan YMCA

Serum Vitamin D and Breast Cancer Recurrence.

Co-Investigator: Cynthia Thomson
Funded by: National Institutes of Health

Gender-Specific Role of Leptin, a Link Between Obesity and Cardiac Extracellular Matrix Remodeling.

Principal Investigator: Sherma Zibadi; Advisor and Joint Appointed Faculty, Ron Watson
Funded by: Sarver Heart Center, University of Arizona

WELCOME

Jamia Fillinger joined our Department in September, and works in the laboratory of Dr. Kirsten Limesand as a Research Technician. She graduated from the University of Arizona in May, 2008, with two degrees, General Biology and Psychology.

Michele Graves is now a Department of Nutritional Sciences employee. She was previously employed by the Department of Physiology and works with Dr. Scott Going.

Marina Hinojosa-Kurtzberg, Ph.D., joined Dr. David Hartshorne's laboratory in September as a Research Associate. Her previous work was with the Mayo Clinic in Scottsdale and Arizona State University.

Mary Marian, M.S., R.D. is a new lecturer in our Department and joined us in August.

Ashley Miller, M.S. joined our Department in November. She works in Dr. Scott Going's laboratory.

Shen Yu, Ph.D., joined our Department in September as a Research Associate and is working in Dr. David Hartshorne's laboratory. Dr. Yu is from Shanghai, China, and his field of research is myosin phosphatase.

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FACULTY PUBLICATIONS

R. Burd *et al.*

Tyrosinase Overexpression Promotes ATM-Dependent p53 Phosphorylation by Quercetin and Sensitizes Melanoma Cells to Dacarbazine. (2008) *Cell Oncology*, 30(5):371-87. Limesand K. (Co-Author)

Normalization of Tumor Vasculature and Improvement of Radiation Response by Antiangiogenic Agents. (2008) In: Antiangiogenic Agents in Cancer Therapy, Ed. Beverly A. Teicher and Lee M. Ellis, Chapt. 18.

Quercetin: A Potential Alternative and Complementary Cancer Therapy. (2008) In: Complementary and Alternative Therapies and the Aging Population: An Evidence-Based Approach, Ed. Ronald Watson.

S. Going *et al.*

Physical Activity Levels in Patients With Early Knee Osteoarthritis Measured by Accelerometry. (2008) *Arthritis Care & Research*, 59(9):1229-1236.

Hormone Therapy Improves Femur Geometry Among Ethnically Diverse Postmenopausal Participants in the Women's Health Initiative Hormone Intervention Trials. (2008) *Journal of Bone Mineral Research*, 23(12):1935-1945.

Changes in Soft Tissue Composition are the Primary Predictors of Four-Year Bone Mineral Density in Postmenopausal Women. (2008) *Osteoporosis International*, DOI 10.1007/s00198-008-0664-5.

N. Hongu *et al.* Electronic Publications

Healthy Fats: Guide for Improving the Quality of Fat Intake. University of Arizona Cooperative Extension Online: <http://cals.arizona.edu/pubs/health/az1452.pdf>, factsheet AZ1452, May, 2008.

GPS Watches for Measuring Energy Expenditure During Physical Activity. University of Arizona Cooperative Extension. Online: <http://cals.arizona.edu/pubs/health/az1476.pdf>, fact sheet AZ1476, October, 2008.

K. Limesand *et al.*

Radiation-Induced Salivary Gland Dysfunction Results From p53-Dependent Apoptosis. (2008) *International Journal of Radiation Oncology, Biology and Physics*, in press.

E. Meillet *et al.*

Discovery of a Novel Class of AKT Pleckstrin Homology (PH) Domain Inhibitors. (2008) *Molecular Cancer Therapy*, 9:2621-2632.

Sodium Selenite Increases the Activity of the Tumor Suppressor Protein, PTEN in Prostate Cancer Cells via the Activation of the Thioredoxin-Thioredoxin Reductase System. (2008) *Nutrition and Cancer*, in press.

S. Misner *et al.*

Strategies of Asian, Hispanic, and Non-Hispanic White Parents to Influence Young Adolescents' Intake of Calcium-Rich Foods, 2004 and 2005. (2008) *Preventing Chronic Disease*, in press.

D. Romagnolo *et al.*

Rosmarinic Acid Antagonizes Activator Protein-1-Dependent Activation of Cyclooxygenase-2 Expression in Human Cancer and Nonmalignant Cell Lines. (2008) *Journal of Nutrition*, 138(11):2098-105.

Targeting of Aryl Hydrocarbon Receptor-Regulated COX-2 Expression in Breast Cancer Cells. (2008) *Journal of Nutrition*, 139:1-7.

Linoleic Acids and Cancer Cell Functions. (2008) In: Fatty Acids in Health Promotion and Disease Causation, American Oil Chemists' Society, Ed. Ronald Watson.

C. Thomson *et al.*

Vasomotor Symptoms, Low-fat Dietary Pattern and Risk of Invasive Breast Cancer: the Women's Health Initiative. (2008) *Journal of the National Cancer Institute*, in press.

A High Vegetable, Fruit, and Fiber Dietary Pattern May Influence Breast Cancer Prognosis in Women Without Hot Flashes: A Secondary Analysis from the Women's Healthy Eating and Living (WHEL) Study. (2008) *Journal of Clinical Oncology*, in press.

Adopting a Plant-Base Diet Minimally Increased Food Costs in WHEL Study. (2008) *American Journal of Health Behavior*, accepted.

D. Geiser and J. Winzerling *et al.*

Iron Loaded Ferritin Secretion and Inhibition by CI-976 in *Aedes aegypti* Larval Cells. (2008) *Comparative Biology and Physiology-Part B: Biochemistry and Molecular Biology*, accepted.

J. Winzerling *et al.*

Winter Metabolism in Deciduous Trees: Mechanisms, Genes and Associated Proteins. (2008) *Revista Fitotecnia Mexicana*, 31(4):295-308. Vazquez-Moreno, L. (Co-Author)

FACULTY IN THE NEWS

DR. BURD - Dr. Randy Burd was selected as the 2008 Lambda Nu Lecturer and presented a two-part lecture series: 1) State of the Art Radiation Biology and Protection. 2) Applying Modern Radiobiology and Devices to Therapy and Protection at Holy Family University, Education Technology Center, Philadelphia, PA.

DR. GOING - Congratulations to Dr. Scott Going and Jennifer Reeves along with Dan McDonald of Pima County Cooperative Extension; they received the 2008 Common Ground Award in the Events, Programs, and Studies category for their work with the Activate Tucson coalition.

DR. HINGLE - Dr. Melanie Hingle was featured in the Arizona Daily Star Accent insert on November 11th for an article titled "Avoid Air Travel Diet Disaster."

DR. HONGU - Congratulations to Dr. Nobuko Hongu along with county faculty Linda Block and Sharon Hoelscher Day who were among others awarded the 1st Place Hemmy Award in Grassroots, Complete Campaign for the UA Cooperative Extension's Walk Across Arizona at the recent Arizona Public Health Association State Conference.

Dr. Hongu was awarded second place in the 2008 Faculty Conference Poster Session for her poster "Designing Weight Loss and Fitness Program using Participatory Approach." She was also given an honorable mention for two other posters title "Walk Across Arizona: A Sustainable Approach for Mobilizing Older Adults" and "Promoting Physical Activity Among Youth through Technological Advances."

DR. HOWELL - Dr. Wanda Howell was interviewed by Helen Sandstrom of Health Smart Magazine for an article which appeared in the August, 2008 issue titled: "Egg Facts."

FACULTY PRESENTATIONS, SEMINARS, AND CONFERENCES

DR. GOING

"Comparison of Physical Activity Measurement Methods in Preadolescent Girls." American College of Sports Medicine Annual Meeting, Indianapolis, IN, May, 2008.

"Effects of Self-Management and Exercise on Physical Activity in Knee Osteoarthritis Patients." International Society for Behavioral Nutrition and Physical Activity, Banff, Canada, May, 2008.

"Fitnessgram Body Composition Standards – Time to Change?" Fitnessgram, Cooper Institute Annual Meeting, San Francisco, CA, June, 2008.

"An Evidenced-Based Approach. Sarcopenia Definition: Why, What and How?" 8th International Symposium on In-Vivo Body Composition Studies Defining Sarcopenia, New York, NY, July, 2008.

"Status and Challenges for Deriving a Definition of Sarcopenia." 3rd International Academy on Nutrition and Aging, Albuquerque, NM, July/August, 2008.

"Exercise and Bone Macro-Architecture: Is Childhood a Window of Opportunity for Osteoporosis Prevention?" 25th International Council for Physical Activity & Fitness Research Symposium, Loma Linda, CA, September, 2008.

"BMI – The Good and the Bad: The Relationship of Body Weight to Glucose Metabolism." 1st World Congress on Interventional Therapies for Type 2 Diabetes, New York City, NY, September, 2008.

The Gerontological Society of America's 61st Annual Scientific Meeting, Washington, DC, November, 2008. Congressional Briefing was included on Capitol Hill.

DR. HINGLE

"Parental Support and Encouragement and Child Self-Esteem Predict Child Weight Status in 8-10 Year Old Hispanic Children." International Society for Behavioral Nutrition and Physical Activity (ISBNPA) Annual Meeting, Alberta, Canada, May, 2008.

DR. HONGU

"Exploring the Use of Geospatial Technology to Estimate Energy Expenditure and Promote Physical Activity." American Dietetic Association (ADA) Food & Nutrition Conference & Expo Annual Meeting, Chicago, IL, October, 2008.

DR. HOWELL

"Feedback and Coaching for Better Learning." the Graduate Assistants in Teaching Orientation (GATO) session, University of Arizona, Tucson, AZ, August, 2008.

"Tips from the Experts." College of Agriculture and Life Sciences Faculty Development Workshop," Tucson, AZ, September, 2008.

DRS. HOUTKOOPER AND HINGLE

The Winning Edge 2008 "Special Topics in Sports Nutrition." Tucson, AZ, October, 2008. For more information see CALS website <http://ag.arizona.edu/sportsnutrition/>.

DR. MEUILLET

"The Future of Cancer Therapy – Individualizing Medicine." Arizona Cancer Center, University of Arizona, "Science at the Center – A day of Discovery." Tucson, AZ, October, 2008.

DR. MISNER

EFNEP Evaluation, NC1169 Research Group, Chicago, IL, October, 2008.

"Calcium Intake in Adolescents." W-2003 Research Group, Minneapolis, MN, November, 2008. She was elected Secretary for 2009.

DR. ROMAGNOLO

"Dietary Targeting of Aryl Hydrocarbon-Mediated COX-2 Gene Expression in Breast Cancer Cells." Meetings of the American Institute for Cancer Research, Washington, DC, November, 2008.

DR. THOMSON

"Cruciferous Vegetable Intake, Tamoxifen Use and Breast Cancer Recurrence," Arizona Cancer Center, University of Arizona, CPC Grant Rounds Seminar Series, Tucson, AZ, August, 2008.

"Conducting Dietary Intervention Trials in Cancer Prevention." Gateway Community College, Phoenix, AZ, September, 2008.

Frontiers in Cancer Prevention, Washington, DC, November, 2008.

American Diabetes Association, Food and Nutrition Conference Expo (FNCE), Chicago, IL, October, 2008.

Women's Healthy Eating and Living Study (WHEL), San Diego, CA, September, 2008.

OTHER AWARDS, PROMOTIONS, AND PRESENTATIONS

Laurel Jacobs received an Arizona Public Health Association Scholarship for her doctoral studies in Health Education.

Erin Nurss former Nutritional Sciences major was crowned Miss Arizona at the 2008 Miss Arizona Pageant held this past June. She holds a bachelor's degree in Nutrition and is currently pursuing a master's degree in Public Health.

Julie West was promoted to Research Specialist, Senior.

JOINT APPOINTED FACULTY NEWS

DR. WATSON - Dr. Ron Watson, Professor, College of Public Health, interim Director of the Division of Health Promotion Sciences and Professor, Family and Community Medicine, in collaboration with Sherma Zibadi, postdoctoral fellow in the Department of Nutritional Sciences and the Sarver Heart Center in the UA College of Medicine were featured in an article in the UAnews, "UA Clinical Trial of Pycnogenol Shows Improvements in Diabetes Patients." In a clinical trial led by Dr. Zibadi, patients with Type 2 Diabetes obtained desirable blood pressure control after taking the flavonoid-rich supplement Pycnogenol with their medications. The full study was published in Nutrition Research (2008)28:315-320.



DR. GERBA - Joint appointed faculty member Dr. Charles Gerba was featured in an article in the Tucson Weekly titled: "They Call Him Dr. Germ." Dr. Gerba, an environmental microbiologist in the Department of Soil, Water and Environmental Science, cheerily explains about the billions of nasty microbes that await us everyday. To read more about the fascinating world of germs and how they affect us, visit the Tucson Weekly website: <http://www.tucsonweekly.com/gbase/Currents/Content?oid=116778>.

UNDERGRADUATE STUDENT AWARDS AND PRESENTATIONS



Congratulations to **Jamie Wise** who was selected as the **Outstanding Senior in the College of Agriculture and Life Sciences** for the December 2008 graduating class. She was honored at an Awards Luncheon on December 11, 2008.

Martha I. Mosqueda is one of 58 undergraduate students who have been selected for the NASA Space Grant Internship Program for 2008-2009. The goal of the program is to integrate research with education to help build a diverse, scientifically literate citizenry. She will be working on nutrition and physical activity research with her mentors, Dr. Hongu, of the Department of Nutritional Sciences and Dr. Orr, of the Department of Arid Lands Resource Sciences. For more information about this award see the following link: <http://spacegrant.arizona.edu/opportunities/internships/>.



NUTRITIONAL SCIENCES CLUB

Soraida Gavino, 2008-2009 Club President; Dr. Patricia Sparks, Club Advisor

NutClub Buzz - The Nutritional Sciences Club has had a busy Fall 2008 semester - close to 15 different volunteer events, and counting! Partnered with the Arizona Nutrition Network (AzNN), the club has provided nutrition education at various Tucson schools and health fairs. Members have also led talks at residence halls regarding nutrition hot topics, been involved in projects, such as the Global Positioning System (GPS) with Dr. Kay Hongu, as well as in Farmer's Market. In November, the club also took part in the 2008 Juvenile Diabetes Research Foundation Walk and the Associated Students of the University of Arizona (ASUA)'s Food Drive to benefit the Community Food Bank. Upcoming club events include nutrition workshops for the Primavera Foundation and Lutheran Social Services Refugee Resettlement Program. The club hopes to continue its fundraising efforts with its club cookbook (\$5.00/each), as well as PowerBar sales (\$1.00/each) at Farmer's Market. The money will help support the club's nutrition education efforts throughout the Tucson community, as well as fund club scholarships for outstanding members.

Thanks to the support of Nutritional Sciences instructors and their students, the Nutritional Sciences Club was awarded \$500.00 for collecting the most food items for the ASUA's Food Drive. Over 4,100 items were collected in the 10-hour drive, and all foods went to aid the Community Food Bank here in Tucson.

ALUMNI UPDATE



Issa Nourmoahmmadi, Ph.D.

Dr. Nourmoahmmadi graduated from the University of Arizona in 1981 with a Doctor of Philosophy degree. He continued with a Post Doctoral Research Fellowship at the University of Illinois and is currently an Associate Professor of Biochemistry and Nutrition at the Iran University of Medical Sciences, College of Medicine, Tehran, Iran. Dr. Nourmoahmmadi has published over 44 papers and presented and attended over 36 conferences throughout the world. Among many other professional affiliations, he is a member of the Iranian Nutrition Society, Iranian Biochemical Society, Iranian Molecular Network Society and the Iranian Trace Element Society. He visits his son frequently, who is working towards his Ph.D. in Biochemistry at the University of Arizona.

Dr. Nourmoahmmadi, with the cooperation of several professors and World Bank, has developed programs in nutrition including molecular nutrition. He also teaches nutrition to graduate students with a focus on micronutrients. His main interest is in micronutrient research and advocating the importance of these essential molecules in different diseases and health. An area of ongoing research for him is the Study of metallothionein 1M and 1G isoform polymorphisms in infertile men and the relationships with zinc in cultured TM4 sertoli cells.

This newsletter is also available online at: <http://nutrition.arizona.edu>. If you would like to receive our newsletter via email, please contact Theresa Spicer at 621-7126 or email tspicer@ag.arizona.edu. The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, or sexual orientation in its programs and activities.

GRADUATE DEGREES



Doctors of Philosophy

Vanessa Farrell

Vanessa plans on staying at the University of Arizona and continuing her work with AzNN, Partner's for Healthy Active Adolescents, Center for Physical Activity and Nutrition, and Cooperative Extension.

Margaret Flowers

Margaret hopes to continue her work in breast cancer prevention at the postdoctoral level or in an industry position. She is currently seeking positions in California and Arizona.

DEPARTMENTAL SEMINARS

Dr. Emmanuelle Meuillet, Assistant Professor. "Inhibition of Novel Molecular Targets of Prostaglandin Formation for Anti-Tumor Activity." September 10, 2008.

Dr. Lance Baumgard, Associate Professor, Department of Animal Sciences. "Effects of Heat Stress on Energetic Metabolism." September 17, 2008.

Dr. Vince Guerriero, Associate Professor, Department of Animal Sciences. "Regulation of Chaperone Activity: The Journey from Gene to Gene Function." October 8, 2008.

Dr. Debora Hamernik, USDA, National Program Leader, of Plant & Animal Systems. "Funding Opportunities for Human Nutrition and Animal Science at USDA-CSREES." November 5, 2008.

Dr. Randy Burd, Assistant Professor. "2nd of the "Phytochemicals" Theme, Chemosensitization of Melanoma by Dietary Quercetin." November 12, 2008.

Dr. Donato Romagnolo, Associate Professor. "3rd of the "Phytochemicals" Theme, Modifying Cancer Risk with AHR Based Phytochemicals." November 19, 2008.

Dr. Kent Erikson, University of California, Davis, Department of Cell Biology and Human Anatomy. "Stem Cell Research and Breast Cancer." December 3, 2008.

NEW N SC COURSES

The following new classes will be available beginning Spring 2009.

N SC 475 - Nutrogeomics for Disease Prevention and Intervention.
Taught by Dr. Burd

N SC 465 - Nutrition and Radiation Therapy.
Taught by Dr. Burd

N SC 531 - Nutrition and Cancer.
Taught by Dr. Limesand

RESEARCH FEATURE: AN INTERVIEW WITH DR. SCOTT GOING

Q. Tell us briefly what you study in your research.

The work in the Body Composition Research laboratory was originally focused on developing methods and models for measuring body composition (body fat, water, muscle and bone) in children. My first NIH grant as PI was awarded in 1986 from the National Institute on Aging to adapt some of the models that were developed in children to older adults, since some of the same measurement challenges are faced when working with the elderly. We have since used the methods to develop health-related body composition standards in children and adults. In more recent years, most of our attention has been given to developing and testing the effects of exercise and diet interventions on modifying body fat, muscle and bone. These projects have been done in diverse groups including children, healthy peri- and post-menopausal women, and men and women with osteoarthritis and rheumatoid arthritis.

Q. Describe your current research and ongoing projects.

Our current NIH project, Jump-In, is designed to test the efficacy of impact exercise on bone geometry in pre-pubertal and early pubertal girls. We think we can strengthen the bones through structural adaptations even if bone mineral density is unchanged. With help from the College of Agriculture and Life Sciences (CALs), we were fortunate to add peripheral quantitative computed tomography to the lab in the past year, which allows us to assess structure and estimate bone strength. Over 450 girls in Tucson area schools are participating. We also have projects in the Sunnyside Unified School District elementary and middle schools, funded by the U.S. Department of Education and the J. R. Alberts Foundation, which are testing programs for improving children's diets and promoting physical activity aimed at preventing excess adiposity. In another project, I am working with colleagues in Public Health and the Arizona Health Sciences Center to understand mechanisms of muscle loss in older women and develop definitions of sarcopenia linked to metabolic and functional outcomes.



Robert Blew of the Department of Physiology performing a DXA scan.

Q. You have listed several collaborations, how do these fit in with your program?

I have been fortunate to collaborate with scientists in many disciplines at UA and other institutions including members of our Nutritional Sciences Department, plus physicians, physiologists, epidemiologists, anthropologists, psychologists, and others. The nature of many of our projects requires expertise from many different disciplines. Most of our projects have a behavioral component that must succeed to get to the body composition outcomes of most interest to me. Others require knowledge in genetics, molecular biology or sophisticated statistical models that are outside my area of expertise. The mix of ideas is what has allowed us to compete successfully for grants.

Q. What do you think is the most important contribution that you have made to your area of science?

Everything I have done has been with the help of many talented people. The body composition assessment methods that were developed in the laboratory have widespread application, and as a result we have had many opportunities to influence projects around the world. We have also been fortunate to contribute to several important multisite prospective trials such as the Women's Health Initiative, and we developed measurement and interventions protocols for Pathways and the Trial of Activity in Adolescents Girls, two of the largest diet and activity interventions in children and adolescents. The BEST study, led by Dr. Tim Lohman, is the longest running and most comprehensive study of resistance exercise in postmenopausal women has led to a very successful statewide program called Bone Builders. Our work in developing health-related obesity standards for youth may have had the most impact as the standards have been adopted for use in health-related fitness tests that are administered in all 50 states plus a number of other countries.

Q. Why is it important?

The concern over childhood and adolescent obesity and its attendant comorbidities, especially the growing problem of Type 2 Diabetes, has renewed interest in standards for screening that are predictive of future disease. Unlike the BMI standards, which are based on percentiles and populations distribution, the standards we developed have linked to chronic disease risk factors and should be more predictive of future outcomes. We are currently working with several large data bases to test whether that is indeed true.

Q. What community groups have you worked with as partners and what are the benefits to the participants of these groups?

We have worked with all of the school districts around Tucson, Tucson Parks and Recreation, the YMCA, Boys and Girls Clubs, Girls Scouts, and others. Our new project, Stealth Health, will include a number of local youth groups promoting civic

RESEARCH FEATURE CONTINUED

engagement, including 4H clubs. Our work with the YMCA has been particularly rewarding. With their help we have developed *The Moving Van*, which brings physical activity equipment and nutrition education to schools with limited resources, a youth mentorship program led by Jennifer Reeves, and YMCA camp at school. Without strong community involvement we can not sustain our efforts and make long-term change, since grants have only a short life.

Q. How have you translated your research into public education?

The BEST study resulted in several publications in journals for practitioners and a book used for training health professional in the BEST program. The ACT and Eat, Move, Learn studies resulted in physical activity and nutrition curricula that are now used in schools around the country and we expect to do the same with Jump-In.

Q. How have you used findings and information from basic research to formulate your intervention studies?

All of our interventions are informed by findings from the more controlled animal studies. Jump-In, for example, was developed from findings showing young animals have greater rates of bone modeling than older animals and that geometric adaptations occur to a greater degree in the younger animals. Also, the parameters of mechanical stimuli most likely to be osteogenic were worked out by other investigators in animal studies and used to develop a human exercise prescription.

Q. How does your research fit into our signature research area of “Metabolic and Behavior Factors Influencing Body Composition?”

Our work ultimately is aimed at body composition outcomes, with a strong focus on the effects of diet and exercise interventions. In the more controlled studies with adults we also have examined effects on biomarkers of bone turnover, insulin sensitivity, inflammation and other metabolic factors. Many of our studies are aimed at understanding psychosocial factors that support adoption and maintenance of health enhancing behaviors.

DEPARTMENT OUTREACH

Increasing Nutrition Education and Physical Activity in the Community



UA Nutrition Educator Joanie Contreras leads middle school students in healthy meal preparation.

June 24th, 2008, marked the start of the **El Rio Weight Loss Fitness Program** held at MEL Center. This 10-week program was a joint project of El Rio Community Health Center, Department of Nutritional Sciences, and Arizona Cooperative Extension, and initiated by *Dr. Kay Hongu*, and *Susan Marks*, MPH, Wellness Program Manager. The goal of this program was to increase knowledge of nutrition and physical activity among Hispanic women in order to encourage and to maintain weight loss and a healthy lifestyle. Program



activities included food demonstrations, food label reading, how to use MyPyramid.gov, demonstrations of physical activities, how to use a pedometer, GPS (Global Positioning System) treasure hunts, and face-to-face counseling. At the end of program participants lost weight on average 6.4 pounds (2.3 to 12.4lb). Participants increased self-awareness about their dietary

habits and lifestyle and became more knowledgeable about the necessity of eating healthy foods and daily physical activity. On average, daily physical activity levels increased to 5 miles of walking (about 10,000 steps) every day. In post-evaluation, participants noted increased self-esteem and interest in healthy lifestyles. The program appears to be an effective weight loss and lifestyle intervention. Nutrition students involved in this program are Jamie M. Wise, Martha I. Mosqueda, and Martha P. Kataura, as well as Kristin D. Wisneski from the Office of Arid Lands Studies.

Through an ongoing partnership with the USDA **Supplemental Food Assistance Education Program**, and the Department of Nutritional Sciences; Arizona Nutrition Network (AzNN) provides funding and support for nutrition education programs in the community under the stewardship of **Dr. Scottie Misner**. The AzNN's target population includes food stamp eligible children and families. Participants are exposed to healthy eating and physical activity behaviors consistent with the Dietary Guidelines for Americans and MyPyramid.gov through an innovative partnership with schools, YMCA and summer recreation programs.



UA Nutrition Educator Maritza Brown teaches Tucson Parks and Recreation students.

In 2007-2008, the Nutritional Sciences Department AzNN has provided over **\$152,000** in funds to support nutrition and nutrition-integrated physical activity programs in Tucson and Marana. Over **26,500** students have been reached with educators logging more than **34,500** nutrition and physical activity hours. The AzNN team includes: **Vanessa Farrell Ph.D., M.S., R.D., Jennifer Reeves M.Ed., Heather Ottenbacher M.S., R.D., Laurel Jacobs MPH, and Jennifer Martinez.**

IN MEMORY OF PROFESSOR DARREL GOLL



Dr. Darrel E. Goll, Professor in the Departments of Nutritional Sciences and Biochemistry and Molecular Biophysics, died on Monday, July 21, 2008. Our deepest sympathies are with his wife, Maria Teresa Velez and to his three children and their families. Darrel was the ultimate academic and excelled in service to the University and was an established researcher. For many years, Darrel was Head of the Department of Nutrition and Food Science. He built an excellent department and his legacy formed the framework for the present Department of Nutritional Sciences. In research, Darrel made many important contributions to the areas of muscle biochemistry and meat sciences. He published over 120 journal articles, contributed many book chapters and innumerable meeting abstracts. In recognition of these achievements he received several awards and throughout his scientific career was well funded by several national agencies. Although Darrel accepted his clinical challenge he maintained a vigorous work ethic and an enthusiastic and optimistic outlook that was reflected in his active and productive research program. The academic community at large has lost an extremely important individual and his many contributions will be sorely missed. His colleagues also will miss his keen intellectual assessments and wisdom and on a more personal level, his friends will miss his optimism, sense of humor and warmth.

If you would like to contribute to the **Darrel Goll Fellowship**, please see the University of Arizona Foundation website <http://uafoundation.org/>. Once at the site click on Make A Gift, go to University Scholarships, then select other and type in Darrell Goll Fellowship. Your gift is 100% tax deductible and can still be applied for the 2008 tax year, if processed by December 31, 2008. If you would like assistance in making this gift or have any other questions, please contact Kirstin Rennels, Assistant Director, Scholarship Stewardship at 520-626-1338 or krennels@al.arizona.edu.

IN MEMORY OF EMERITUS PROFESSORS WM. "MAC" MCCAUGHEY AND JAMES W. BERRY



William F. McCaughey "Mac" 86, died August 13, 2008 in Miami, FL. Born October 1, 1921 in Park Ridge, Illinois; he was a resident of Tucson from 1947 until 2003, and always considered Tucson his real home. Our sympathy is extended to his surviving daughter and son-in-law, Lisa and Justin Enfinger, of Miami. Mac earned a B.S. in Chemistry in 1942 from Purdue University, his M.S. in Biochemistry from Northwestern University and his Ph.D. in Agricultural Chemistry from the University of Arizona. He was a 2LT in the Field Artillery in the South Pacific during the final years of WWII and retired in September 1974, with the rank of Colonel. Mac joined the faculty in 1951, teaching Biochemistry and later, Nutritional Science, to an estimated 25,000 students over the course of his career. He retired as Professor Emeritus in 1994, but continued to teach part-time as long as his health allowed.

Mac was a founding member and secretary for years of the U of A Faculty/Staff Bowling League. He moved to Miami in November 2003. Mac loved receiving cards, letters and phone calls from friends in Tucson. Besides his family, Mac leaves behind countless friends, colleagues, and former students whose lives he enriched.

Mac and Dr. Wolfe started the "Fleece Fred and Mac" program, where the two men matched donor contributions to launch a Scholarship fund now known as **The Wolfe/McCaughey Nutritional Sciences Endowed Fund**. If you would like to contribute to this fund please follow the same instructions above and type in Wolfe/McCaughey Fund instead of Darrel Goll Fellowship.



Dr. James Wesley Berry 82, died May 7, 2008 at Mountain View Care Center. Dr. Berry was born March 23, 1926 in Rankin, Illinois, son of Chester Berry and Helen Berry. He served with distinction during World War II in the U.S. Army from 1944-1945. He later received his PhD in organic chemistry in 1953 at the University of Illinois at Urbana-Champaign. He moved to Tucson in 1956 as a professor of chemistry at the University of Arizona where he received the William V. Cruess Award for teaching. He was preceded in death by his beloved wife Alice in 1998 and is survived by five sons, Michael, John, Peter, Thomas and Steve and many grandchildren and great grandchildren. His last nine years were spent with his partner, Dr. Mary Ann Kight, enjoying the desert southwest and participating in development of the Biomedical Nutrition Intellectual Reserve.

An endowment fund is being established in honor of Dr. Berry. If you wish to contribute to this fund please contact Trudy Morrow at: morrow1@email.arizona.edu.