

NUTRITIONAL SCIENCES DEPARTMENT NEWSLETTER

College of Agriculture and Life Sciences
The University of Arizona



Spring 2007

GREETING FROM THE DEPARTMENT HEAD



The spring semester has been filled with many challenges, activities and achievements by our faculty, staff, students and alumni.

Our Department completed the Academic

Program Review by the University and the United States Department of Agriculture in February. The faculty and staff in the Department worked hard in completing a self-study of our instruction, research and Cooperative Extension/Outreach programs. A team of nine people from USDA, other leading nutrition departments in the country, administrators and Department alumni formed the review committee. This review demonstrated that our Department has achieved excellence in instruction, research and outreach programs. For example, among the Departments/Units in the College of Agriculture and Life Sciences our Department ranks:

- 1st in the ratio of undergraduate student credit hours taught per instructional faculty from 2002 - 2006.
- 1st in the number of General Education Student credit hours taught by our faculty from 2002 - 2006.
- 3rd in the number of Undergraduate degrees awarded from 2002 - 2006.
- 4th in Sponsored Funding Support from grants and contracts in fiscal year 2005 - 2006, up from ranking 8th in fiscal year 1999 - 2000.
- 2nd in the level of Sponsored Funding Support (FY 2005-06) obtained per faculty member.
- Our Department has 326 undergraduate majors, 7 masters students, and 22 doctoral students.

Our Departmental graduate program was ranked 10th in the nation by the 2005 Scholarly Productivity Index. This is a

significant achievement. The Nutritional Sciences Graduate Program is lead by Dr. Darrel Goll and Dr. Joy Winzerling. Janet Christner retired in December from her position as Program Coordinator for the graduate program in the Department. We welcomed Nancy Driscoll to her new role as the Coordinator of Graduate Programs for our Department in January.

Dr. Fred Wolfe will be retiring from service in our Department as a faculty member and the former Department head at the end of the spring semester. We extend best wishes to both Dr. Wolfe and Janet as they start new chapters in their lives.

I am also pleased to announce that Dr. Cynthia Thomson has been promoted to Associate Professor with tenure. This honor recognizes her outstanding contributions in research, teaching and service. Congratulations Cyndi.

Plans for the program for the second biennial Research Frontiers in Nutrition Sciences Conference have been completed. The conference will focus on innovations and future directions for nutrition research related to diabetes, cancer, obesity, nutrigenomics and bioinformatics. Co-sponsors for the conference include the College of Agriculture and Life Science, the Arizona Cancer Center, the BIO5 Institute, Eurofresh, the Mel and Enid Zuckerman College of Public Health, the Center for Physical Activity and Nutrition, and Novo Nordisk.

This newsletter highlights just some of the news from our Department. More Information on our Departmental faculty, staff, students and our Instruction, Research and Outreach/Cooperative Extension educational programs is also available on our Departmental website at: <http://nutrition.arizona.edu/>.

I hope you take time for recreation and renewal this summer.

Sincerely,

Linda Hunt-Kooper

NEW AND RENEWED GRANTS

DR. LIMESAND

Suppression of irradiation-induced salivary gland dysfunction by IGF-1.
Principal Investigator: Dr. Steven M. Anderson
Subcontract to: Dr. Kirsten H. Limesand
Funded by: University of Colorado Technology Transfer Office.

NSF-Collaboration to Advance Teaching Technology and Science Graduate Student Fellowship.
Principal Investigator: Dr. Geoffery Mitchell
Mentor: Kirsten H. Limesand

Rescue of radiation-induced salivary gland dysfunction by Akt.
Principal Investigator: Kirsten H. Limesand
Funded by: Science Foundation Arizona
R03DE017918-01.

DR. ROMAGNOLO

Epigenetic Silencing of BRCA-1 and Protective Effects of Dietary Components.
Principal Investigator: Dr. Donato Romagnolo
Funded by: Susan G. Komen Breast Cancer Foundation.



FACULTY PUBLICATIONS

DR. BURD

Wachsberge, B.R., Voorhees, Cr. P.R., **Burd, R.**, Cardi, C., Thakur, M., Daskalakis, C., Holash, J., Yancopoulos, G.D. and Dicker, A.P. *VEGF trap in combination with radiotherapy improves tumor control in u87 glioblastoma.* Int Journal of Radiation Oncology Biology Phys. April 1; 67(5):1526-37. Epub 2007 Jan 17. PMID: 17234361.

Lanza-Jacoby, S., **Burd, R.**, Rosato, F.E. Jr, McGuire, K., Little, J., Nougilly, N. and Miller, S. *Effect of simultaneous inhibition of epidermal growth factor receptor and cyclooxygenase-2 in HER-2/neu-positive breast cancer.* Clinical Cancer Research, 10/15; 12(20 pt 1): 6161-9; PMID:17062693.

DR. GOING

Milliken, L.A., Wilhelmy, J., Martin, C.J., Finkenthal, N., Cussler, E., Metcalfe, L., **Going, S.B.**, and Lohman, T.G. *Depressive symptoms and changes in body weight exert independent and site-specific effects on bone in postmenopausal women exercising for 1 year.* J Gerontol A Biology Science Medical Science, 5:488-94, 2006.

Rushovich, B.R., Voorhees, C.C., Davis, E., Neumark-Sztainer, D., Pfeiffer, K.A., Elder, J.P., **Going, S.**, and Marion, V.G. *The relationship between unsupervised time after school and physical activity in adolescent girls.* International Journal of Behavioral Nutrition and Physical Activity, July 31; 3:20, 2006.

DRS. GOING AND HOUTKOOPER AND VANESSA STANFORD, M.S., R.D., C.S.C.S.

Houtkooper, L., Stanford, V., Metcalfe, L., Lohman, T., and **Going, S.** *Preventing osteoporosis the Bone Estrogen Strength Training way.* American College of Sports Medicine's Health & Fitness Journal 2006; 11(1): 21-27.

DR. MEUILLET

Song, Z., Brabant, M., Saghafi, N., Brabant, M., and **Meuillet, E.J.** *The regulation of the tumor suppressor activity, PTEN by thioredoxin controls cell number and cell size.* Experimental Cell Research, 2007, 313 (6):1161-71.

DR. THOMSON

Hong, S., Bardwell, W.A., Natarajan, L., Flatt, S., Rock, C.L., Newman, V., Madlensky, L., Mills, P.J., Dimsdale, J.E., **Thomson, C.A.**, Hajek, R.A., Chilton, J.A. and Pierce, J.P. *Correlates of physical activity level in breast cancer survivors participating in the Women's Healthy Eating and Living Study (WHEL).* Breast Cancer Research & Treatment. 101(2):225-232, 2007.

Saqib, N., Flatt, S., Natarajan, L., **Thomson, C.A.**, Bardwell, W., Caan, B., Rock, C.L. and Pierce, J.P. *Weight gain and recovery of pre-cancer weight after breast cancer treatments: evidence from the Women's Healthy Eating and Living (WHEL) Study.* Breast Cancer Research and Treatment Nov 23, 2006 (Epub).

Book: Sarubin, A. and **Thomson, C.A.** *The Health Professional's Guide to Popular Dietary Supplements*, 3rd edition, American Dietetic Association, Chicago, IL, 2007.

DR. WINZERLING

Geiser, D.L., Mayo, J.J. and **Winzerling, J.J.** *The unique regulation of Aedes aegypti larval cell ferritin by iron.* Insect Biochem. Mol. Bio. doi:10.1016/.ibmb.2007.01.003, 2007.

FACULTY IN THE NEWS

DR. MEUILLET

Dr. Meuillet's program in drug discovery for cancer treatment was featured by Susan McGinley in the University of Arizona, College of Agriculture and Life Sciences 2006 Agricultural Experiment Station Research Report. The article is titled "New Leads for Cancer Drugs". This work is currently funded by the NIH in collaboration with the MD Anderson in Houston, Texas.



GIFTS AND ENDOWMENTS

Special recognition to the **Stanford family** in honor of Vanessa Stanford's mother for the Memorial Gift to the Center for Physical Activity and Nutrition.

Thank you to **Dorothy Bowers** for her endowment of the Dorothy Bowers Student Support Award.

Thank you to the **Klingenberg family** for their endowment of the Paul J. and Gladys Bull Klingenberg award.

Both the Bowers and Klingenberg family endowments will be used for student support awards which include traditional scholarships.

Thank you to Dr. **Fred Wolfe and Dr. William McCaughey** for help in raising funds to create the Nutritional Sciences Department Endowment Fund previously known as the Wolfe/McCaughey Nutritional Sciences Endowed Fund. This endowment will provide scholarships to students.

NUTRITIONAL SCIENCES UNDERGRADUATES

Welcome to **Jamie Elliott**, an undergraduate student who joined Dr. Winzerling's laboratory in January.

Congratulations to **Brandon Hernandez** who will be graduating this May. Brandon has been working in Dr. Winzerling's laboratory while completing his thesis towards his Biochemistry and Molecular Biophysics major as well as a Nutritional Sciences major.

Congratulations to **Erin Nurss** a Dietetic major, who received the Outstanding Graduating Senior award.

The Honors College Undergraduate Research Grant

Congratulations to the following Nutritional Sciences undergraduate students for receiving The Honors College Undergraduate Research Grant award.

Stacey Borrego, who works in Dr. Winzerling's laboratory.

Randi Byrd, who works in Dr. Houtkooper's laboratory.

Kirsten Scheckel, who will be working in Dr. Romagnolo's laboratory beginning this summer.

Lissette Velasquez, who works in Dr. Winzerling's laboratory.

INVITED PRESENTATIONS, SEMINARS, CONFERENCES AND POSTERS

DR. BURD

Invited Presentation: Thangasamy, T., Sittadjody, S., Lanza Jacoby, S., Wachsberger, P., Limesand, K. and **Burd, R.** "Quercetin selectively enhances apoptosis in melanoma cells over-expressing tyrosinase." 2007 American Association for Cancer Research.

Invited Presentation: Sittadjody, S., Thangasamy, T., Biaglow, J.E., Chen, C.S. and **Burd, R.** "Cell-specific redox pathways can be targeted using disulfides to induce cell death: Enhancement by low pH and quercetin." 2007 American Association for Cancer Research, Los Angeles, CA.

DR. HOUTKOOPER

Invited Presentation: Dr. Houtkooper was selected as a delegate to the 2007 International Association of Athletics Federations (IAAF) Nutrition Consensus Conference held at the IAAF headquarters in Monte-Carlo, Monaco from April 17-20th.



Invited Presentation: The B.E.S.T. Exercise Program for Osteoporosis Prevention in Postmenopausal Women, 2007 Experimental Biology Conference Symposium, Washington DC, May 1st.

DR. HOWELL

Invited Presentation: "Connecting All Women-Breaking Down Barriers", Arizona Women in Higher Education Conference, October 27, 2006.

Invited Presentation: Caregiver Conference, Southern Arizona Alzheimer's Association, March 7, 2007.

DR. LIMESAND

Invited Presentation: Mitchell, G. and **Limesand, K.H.** "Regulation of p73 and p63 isoforms in salivary acinar cells." Gordon Research Conference on Salivary Gland and Exocrine Research, Ventura, CA, February 2007.

Invited Presentation: Shin, Y.J., Burd, R., and **Limesand K.H.**, "Akt prevents radiation-induced salivary gland damage *in vivo* and preserves tissue function." International Association for Dental Research Conference, New Orleans, LA, March 2007.

DR. MEUILLET

Invited Presentation: "Aberrant Signaling Pathways: Targeting strategies for the treatment of glioblastomas." Glioblastoma Workshop, Arizona Cancer Center, March 17th, 2007.

DR. THOMSON

Invited Presentation: "Nutrition, body weight and breast cancer survivorship", ASU Healthy Lifestyles Conference, Tempe, AZ, February 2, 2007.

Invited Presentations: "Functional foods for diabetes; make a difference, make a profit", Focus on the Future Conference, Scottsdale, AZ, January 31, 2007.

Poster Presentation: McCune, L.M., Roy, R., Zheng, X., Green, T.K., Reid, P.M. and **Thomson, C.A.** "Short term effects of green tea on resting energy expenditure, oxidant stress and inflammation in overweight/obese post-menopausal women", FASEB Conference, Washington D.C., May 2007.

DR. WINZERLING

Invited Presentation: "Mosquito Iron Metabolism," Southern Arizona Mosquito Meeting, Tucson, AZ.

Conference: AHSC Frontiers in Biomedical Research Poster Forum, Tucson, Arizona.

Conference: Experimental Biology 2007, Washington, D.C.

Poster Presentation: Geiser, D.L., Bridgers, J.S.D., and Winzerling, J.J. "The regulation by iron of a putative divalent metal transporter and ferritin in *Anopheles gambiae* 4a3b cells. BIO5 Graduate Student Recruitment Poster Session, Tucson, AZ.

NUTRITIONAL SCIENCES GRADUATE PROGRAM

Congratulations to the following Graduate Students who will be graduating in May 2007.



Master of Science

Shawna B. Comer Leah Frankel

Doctor of Philosophy

Renu M. Stephen Zeina Wadi Makhoul

Congratulations to Stephanie Degner

Stephanie Degner, a Ph.D. candidate in our Department was selected to receive the Kraft Foods Predoctoral Fellowship from the American Society for Nutrition for the year 2007. Stephanie, accompanied by her major Professor Dr. Romagnolo, received the award at a ceremony held at the annual meeting of the American Society for Nutrition in Washington, DC on April 29th.



RETIREMENT

Congratulations to the following for their years of service to the department and the University of Arizona.

Janet Christner joined the University of Arizona in October of 1983, where she worked at the University Medical Center. Since that time, she has worked in the Department of Geology and the Department of Animal Sciences. Janet joined the Department of Nutritional Sciences in January 1998 and was the Program Coordinator for the Graduate Program. We wish Janet well in her retirement and her endeavors in the future.

Dr. Fred Wolfe joined the University of Arizona and the Department of Nutritional Sciences in July of 1995. His contributions to the Department included serving as department head for 6 years, from 1996 to 2003. Dr. Wolfe was department head during a period of tumultuous transition. Among his accomplishments were the hiring of key faculty and support staff, to fulfill his objectives to unify and harmonize purpose and cooperation within the Department.

He had many other achievements as department head. During his time as head plans were set in motion to phase out the Interdisciplinary Ph.D., and transfer responsibility for the Ph.D. Program to Departmental status. He created our departmental general education program in the natural sciences (NATS 104). He led the team who developed the Nutrition Food and You course in both traditional and online formats. This popular course has been taken by nearly 10,000 University of Arizona students. Since stepping down as head, he has been active in the NATS 104 program, and contributing to research projects in the department. We wish Dr. Wolfe the best in his retirement and his endeavors in the future.

UPCOMING CONFERENCES



Research Frontiers in Nutritional Sciences Conference

The second Research Frontiers in Nutritional Sciences Conference will be held October 22-23, 2007 at the University of Arizona, Student Union Grand Ball Room.

Goals for the conference:

- Discuss novel interactive research approaches to the treatment and prevention of diabetes, obesity, and cancer.
- Develop and facilitate key collaborations and interdisciplinary interactions among scientists affiliated with Arizona universities government agencies, and private industries.
- Provide a platform to showcase current research being conducted in Arizona.

For more information on the conference please visit the conference website at <http://nutrition.arizona.edu/nscconf/>. Or contact Theresa Spicer at 621-7126 or email tspicer@ag.arizona.edu.

JOINT APPOINTED FACULTY

DR. BAUMGARD

Congratulations to **Lance Baumgard** who will be receiving the American Dairy Science Association Young Scientist Award this summer at their annual meeting in San Antonio, Texas.

HONORS AND AWARDS

DR. HOUTKOOPER

Congratulations to Dr. Linda Houtkooper, for receiving the University of Arizona, College of Agriculture and Life Sciences' Administrator of the Year Award. This award is in recognition of Outstanding Administrative Leadership in the College.



DR. HOWELL

Congratulations to Dr. Wanda Howell who was named Chair of the Program Advisory Committee for the University of Medicine and Dentistry of New Jersey's Graduate Programs in Clinical Nutrition.

DR. LIMESAND

Congratulations to Dr. Kirsten Limesand who was elected to Director 1st year in the Salivary Research Group at the International Association for Dental Research Conference.

Dr. Limesand was also recently recognized at the National Institutes of Health for her research efforts as one of the scientific advances in the Salivary Research Program in the report to the January 2007 NIDCR Advisory Council. (<http://www.nidcr.nih.gov/NewsAndReports/ScienceNewsInBrief/CellDeath.htm>).

DR. MEUILLET

Congratulations to Dr. Emmanuelle Meuillet for an Honorable Mention by the Gelman Foundation, for the project entitled "Novel inhibitors for mPGES1 as anti cancer drugs for the treatment of breast cancers."

DEPARTMENTAL SEMINARS

Dr. Lance Baumgard, Assistant Professor, Department of Animal Sciences
Topic: A Recent and Untraditional Evaluation of Dietary Fat on Human Health.
January 17, 2007

Dr. Patrick Chiasson, Northwest Medical Center, Tucson, AZ.
Topic: Bariatric Surgery Update.
February 21, 2007

Dr. Tsu-Shuen Tsao, Department of Biochemistry and Molecular Biophysics
Topic: Molecular Connections between Obesity, Diabetes, and Cancer.
March 7, 2007

Dr. James R. Sowers, Director, Diabetes Research Center, Professor of Physiology, Professor of Medicine, University of Arizona
Topic: Diabetes and Cardiovascular Research.
March 28, 2007

Dr. Nicolette Teufel-Shone, Associate Professor of Public Health, College of Public Health
Topic: We be Jammin' 4 Life: A Native Community Driven Health Promotion Program.
April 11, 2007

Dr. Kay Hongu and Vanessa Stanford, M.S. R.D. Department of Nutritional Sciences
Topic: Cooperative Extension: Bringing the University to the People.
April 18, 2007

NUTRITIONAL SCIENCES ALUMNI UPDATE



Michael Stephan Wills. Mike graduated cum laude from the University of Arizona in 1975 with a Nutrition and Dietetics Bachelor of Science degree, followed by a Dietetics Internship that was also completed at the U of A. As an undergraduate, Mike developed a nutritional analysis software application in the Fortran language which was used for over 15 years by the Nutritional Sciences department. During these years Mike began his career in dietetics and eventually specialized in the computerization of foodservice and dietetics. In 1985, he was the Director of Software development by the Data Control Corporation and in 1986 joined the CBORD Group of Ithaca, New York.

During Mike's tenure, CBORD has grown in sales from 1 million to over 50 million dollars per annum and Mike was eventually promoted to Director of Quality Assurance. He is currently a Senior Advisory Quality Assurance Analyst working with a team to develop the next generation of web based Foodservice and Clinical (Dietetics) software.

Mike is skilled in managing change associated with the introduction of new techniques and tools. As an author and speaker Michael Wills is an internationally recognized expert in the integration of reliability modeling with the software development cycle.

Mike serves the University of Arizona on the College of Agriculture and Life Sciences Alumni Board of Directors. He is also a professional photographer with a web site at www.MichaelStephenWills.com. His work is on display in the University of Arizona Athletics Department.

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.

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