Dear Alumni, Students, and Friends,

Greetings to all. I am so glad to have an opportunity to brief you on the “State of the Department.”

The department is enjoying continued growth. The number of students who declared NFS as their major has increased from 67 in 2005 to 336 in 2011 and our graduate program has expanded from 31 students to 58 students during the same period of time. The most exciting news is the high enrollment in our general education course NFS 2030 Nutrition and Health.

We have over 1000 students taking this entry level course each year! With more freshmen and sophomore students being exposed to the field, more and more students see that nutrition and food science not only provides excellent preparation for health-related professional schools, but also a wonderful ticket to personal health and well-being. Our faculty takes pride in providing a warm and welcoming environment to nurture these young, inquiring minds for them to explore the exciting and challenging world of nutrition and food science.

Our faculty is also expanding. Our latest addition is Dr. Maria Pontes Ferreira. A brief introduction of Dr. Ferreira is on page 2. In addition, we are actively recruiting a faculty member specializing in obesity related research to join us in the fall semester. This new member will be a part of the Interdisciplinary Program in Obesity Research and Education.

The articulation to establish a degree program that can be completely accomplished at the Macomb Community College Center has been approved by the Board of Governors and is off to a good start. This program is in cooperation with the Culinary Arts Certificate program at Macomb Community College. Students who finish the 2-year Certificate Program at MCC can apply to WSU and pursue a BA degree in Nutrition and Food Science. This articulation was established to fulfill the growing demand for baccalaureate-prepared executive chefs and R&D chefs with nutrition expertise in the industry.

We have established a nutrition core in the Department of Clinical and Translational Sciences. This core will provide nutrition-related services to on-campus and off-campus researchers. At the present time, the services we will provide include: designing study menus, diet analysis, recipe modifications, cooking demonstrations, body composition analysis and food safety measurements. There will be a fee for services and users can make requests or reservations online through the core website. The opportunity to be a core facility in clinical and translational research not only provides valuable services and collaboration to researchers, but also provides field practice and experiences to our graduate students and students in the Coordinated Program in Dietetics.

Welcome Dr. Maria Pontes Ferreira to our Department

Dr. Maria Pontes Ferreira, RD joined our faculty in the Department of Nutrition and Food Science in the Fall of 2011. She received her dietetics training at the Mayo Clinic, Rochester, MN. She completed her doctoral training at Baylor University, Waco, TX in Exercise, Nutrition, and Preventive Health. She just completed her 3 year NIH postdoctoral training at the University of Kansas/Haskell Indian Nations University, Lawrence, KS before coming on board. She brings with her 2 avenues of research: (1) Complementary and Alternative Medicine to augment human health and performance; and (2) Exercise & nutrition interventions to prevent and treat chronic disease. Currently, she is focusing on the first research avenue. She and her graduate students are completing a multi-institution, international survey of natural health product use by mainstream and aboriginal students. Also, she currently teaches NFS 2030 Nutrition and Health, which is a general education course for WSU undergraduates.

MESSAGE FROM THE CHAIRMAN (continued)

Our department has established collaboration with the Universiti Kebangsaan Malaysia (UKM) in research and academics in nutrition, food science and dietetics. Dr Tilakavati Karupiah from UKM has visited and lectured to our CPD students. Dr. Smiti Gupta and Prof. Tonia Reinhard also visited UKM and delivered lectures there. We expect to have more student and faculty exchanges in the near future. This collaboration brings our department to the international stage. Thanks go to Dr. Pramod Khosla for facilitating this agreement between our two universities.

As we are moving forward by leaps and bounds, we also look back to reminisce the times we spent together in the department. If you have not kept in touch with your former professors and friends, please drop us a line. We always look forward to hearing from you and appreciating your continued support and input.

Best wishes to all.

Cathy Jen, Professor and Chair

NEW FACULTY

Faculty Publications

- Patterson D, Cabello DC. Down syndrome as a model of DNA polymerase beta haploinsufficiency and accelerated aging. Mech Ageing Dev. [Epub Ahead Of Print]
NEW NFS GRADUATES (11-12)

CPD GRADUATES

Angela Abbass
Jessica Deroche
Stacy Ellenbaas
Daniela Filimon
Susan Frontczak
Ashlee Hisson
Jessica Isaac
Rachel Jones
Samantha Linden
Koren McCue
Sanya Rizwan
Krista Robinon
Alissa Thompson
Ashley Wozniak

Bachelor of Science

Aaron Cloutier
Hussein Hijazi
Saddig Kaid
Rosemary Kezy
Melissa Maroki
Julie Mojo
Maria Mojso
Paul Shamoan
Kaitlyn Simmonds
Aaron Stubbs
Giau Truong
Christine Ngo
Tanel Boji
Angela Oska
Farinaz Bozorgnia
Christopher Petros
Shaye Campbell
Vasjana Tomco
Mariann Habbab
Farah Yousif
Hussain Hazimi
Asia Zierle-Ghosh

Bachelor of Arts

Michirsha Edins
Laticia Hollins
Evan Fletcher
Pierre Halabu
Sarah Ingratta
Noel Leon-Issac
Sana Tariq
Brittany Qumil Noura
Kanza Elana Lebovic
Alison Mazzara
Latrice Mitchell
Melanie Samona

Doctor of Philosophy

Deepa Kushwaha
Lisa Lucente
Mansi Parasarman
Deepindar Kaur
Arvid Goja
Janice Rueda
Amanda Pillig
Archana Unnikrishnan

Master of Science/Arts

Fernando Costa
Shent White
Zulfitri/Azuan Mat Daud
Susan Frontczak
Niciluna Lupu
Michael Williams
Jenha Muir
Lyla Ibrahim
Anee Usman
Janice Jackson
Monika Wadehra
Hadil Subhi
Lindsay Garfield
Sukayna Ismail
Mariam Baydoun
Bryan Strouse

Bachelor of Science

Gautam Ramesh
Jenha Muir
Anee Usman
Stephanie Stewart
Sarah Akhtar
Sarah Bugosh
Mehnoosh Dameshjo
Gabrielle Monit
Stan Wadeloski

Dr. Michael Pellizzon (Ph.D. 2002, Jen) is now the Senior Scientist, Research Diets, INC. in New Jersey.

Dr. Anne Buison (Pellizzon) (Ph.D. 2002, Jen) is a faculty in College of Saint Elizabeth (CSE) in Morristown, NJ. Dr. Buison and Dr. Pellizson are the proud parents of Benjamin (7 yrs old) and Olivia (3 yrs old) Pellizson.

Dr. Kathryn Brogan (Ph.D. 2008, Jen) is the Project Manager for the “Interventionist Procedures for Adherence to Weight Loss Recommendations in Black Adolescents” project in Wayne State University.

FACULTY FOCUS

Dr. Yifan Zhang’s research group works on microbial food safety. The overall goal is to understand the role that food and agriculture play in transmitting human infectious diseases. Food and food production environment are important reservoir of human bacterial pathogens. Agriculture practice and food processing may select certain molecular features of foodborne bacteria, which may facilitate bacteria to contaminate and persist in the food chain, develop antimicrobial resistance or other virulence potential, and possibly cause human diseases. Specifically, we are interested in microbial source tracking in the food chain by using pulsed-field gel electrophoresis (PFGE) and other molecular tools, molecular epidemiology of major foodborne and nosocomial pathogens, including their antimicrobial resistance, and the investigation of contributing factors to microbial occurrence and persistence in the US food supply. The bacteria models that are currently under study are Listeria, Staphylococcus, and Enterococcus.

Dr. Zhang’s work on methicillin-resistant Staphylococcus aureus (MRSA) from US retail meat was featured in the June 2011 issue of Emerging Infectious Diseases, the CDC’s monthly peer-reviewed public health journal. The research was one of the few studies looking at MRSA, a hospital-associated bacterium, in US retail meat associated with infectious disease. The study raises public awareness on microorganisms sharing common reservoirs in agriculture, environment, and human clinical settings. A wide range of national and international media from North America, Asia, and Europe have covered the findings. Dr. Zhang is a recipient of the 2011 International Professorship Award from American Society for Microbiology.

Dr. Diane Cabelof’s lab investigates the impact of aging on genomic instability, and the role that folate may play in this process. Her lab is also investigating the role of ancient DNA repair and folate metabolism may promote the genomic instability and premature aging of Down syndrome. Dr. Cabelof was funded by the American Federation for Aging Research (AFAR) and is presently funded by the Ellison Medical Foundation. She has presented her research at the Gerontological Society of America annual meeting in Atlanta, GA (2010), Gordon Research Conferences in Ventura, CA and Newport, RI (2009, 2012), US-Indo BER and Aging Symposium in Hyderabad, India (2011), and The Society for Neurochemistry annual meeting in Hyderabad, India (2011). Dr. Cabelof’s lab is currently staffed by Rita Rosati (postdoctoral fellow), Kirk Simon (research assistant) as well as 2 PhD students (Hongzhi Ma, Aqila Ahmed) and 2 MS students (Sarah Dubaisi, Eneida Doko).

Dr. Kevin Zhou’s research focuses on value-added nutraceutical and functional food development for promoting human health. Dr. Zhou is currently directing 3 PhD and 2 master students. His group is working on several active projects, including the selection of bioactive component in grape products for potential prevention and treatment of Type-2 diabetes, characterization of Graviola juice for extracting EGFR-positive breast cancer, and development of novel antimicrobial components. Dr. Zhou’s group has published or co-published 6 peer-reviewed papers.
Dr. Smitti Gupta’s research focuses on combining metabolomics, a new and exciting post genomic technology with the power of bioinformatics tools, for studying perturbations in metabolism resulting from changes in diet and/or the disease state. In one of her projects, Dr. Gupta’s group is investigating the change in the metabolomic pattern of a pancreatic cancer model. The biological samples (plasma, urine and/or cells) are subjected to nuclear magnetic resonance spectroscopy (NMR) followed by multivariate analysis of the NMR spectral data. In addition to providing early risk markers for pancreatic cancer, the change in metabolomic pattern or the biomarker profile will enable targeting of specific metabolic pathways affected by the disease condition, leading to mechanistic insight and possible preventative and/or therapeutic targets.

Dr. Gupta was invited to present her work this year at international conferences in Las Vegas, and Malaysia. In addition, she conducted an intensive 2-week metabolomics workshop in Kuala Lumpur. Dr. Gupta has a very active research program and has brought in ~$1 million in research funding since 2009.

Prof Mary Width is a Senior Lecturer in the Coordinated Program in Dietetics. In addition to teaching, she also coordinates the supervised field experiences for the dietetic students (the CPD currently has relationships with over 75 different clinical, community, long-term care and food service sites in the tri-county area). Mary is currently the web-site manager for both the Michigan (MDA) and Southeastern Michigan (SEMDA) Dietetic Associations. She also serves on several committees, including: The Health Sciences Committee of the President’s Commission on the Status of Women, the WSU Academic Senate and the NFS Salary Committee. Mary is co-director of the Clinical Nutrition course at the WSU School of Medicine, and she is also the co-author of a book with Tonia Reinhard entitled, “The Clinical Dietitian’s Essential Pocket Guide,” published by Wolters-Kluwer Health.

Dr. Pramod Khosla: During 2010-11, two students completed their PhDs (Drs. Deepinder Kaur and Janice Rueda) and 4 students their MS degrees from the Khosla lab. Over the year Dr Khosla gave invited talks in New Orleans, Washington DC, South Korea, Malaysia, Spain and the Netherlands where he co-chaired a symposium on the latest research on saturated fat. He also gave testimony at USDA in relation to the 2010 Dietary Guidelines. His lab is currently continuing with a project looking at the effects of various oral supplements on inflammatory markers in hemodialysis patients. funded by a Malaysian Government agency. Dr. Khosla became the Departmental Graduate Officer again in 2011. In addition, Dr Khosla became more involved with the AAUP and took on additional service assignments at the College level.

Ms. Zebari has been an employee at Wayne State University since 1978. She has worked in the College of Education, Purdy Library, College of Liberal Arts and Sciences, School of Business Administration, ACCESS, and Merrill Palmer Institute throughout her tenure at Wayne State University. Since 2005 she has been in the Department of Nutrition and Food Science.

She is an Academic Services Officer II and was awarded her Employment Security Status. For the school year 2010-2011 Ms. Zebari was selected as the recipient of the ASPDC Outstanding Contributor Award “at Wayne State University. She is an asset to the department as enrollment has more than tripled as well as declared majors.

Ms. Patricia Hanserd with her warm smile continues as a Senior Accounting Assistant.

Canika Bhargava (Ph.D. graduate): Recipient of 2011-2012 Nell I. Mondy Fellowship, Graduate Women In Science (GWIS) Foundation.

Poster presenters at Midwest DNA Repair Symposium, Toledo, 2011: Hongzhi Ma “Impact of Folate Depletion on Uracil Metabolism”; Aqila Ahmed, Eneida Doko, Sarah Dubaisi “Aberrant oxidative stress response in Ung~ mouse embryonic fibroblasts”.

A note from one of our alumni (Cont.)

Food Intolerance

Food intolerance can produce symptoms similar to food allergy but does not involve the immune system. Instead, when the food in question is consumed, it is not properly digested and begins to ferment inside the gut. The best example of food intolerance is lactose intolerance. This condition is characterized by bloating, loose stools or diarrhea, and gas. Lactose intolerance is caused by an inability of the body to produce sufficient quantities of the enzyme which breaks down lactose, the primary sugar found in milk. Avoiding milk or supplementing their diet with lactase is the best way for a person with lactose intolerance to overcome his or her problem.

If you are a nutrition and dietetics student with special interest in helping individuals with allergies and intolerances, it is important not only to have expertise in elimination diets but also to understand gut-brain connections and the mechanics of immunologic (Ig E and non IgE) reactions and intolerances. Having a patient-centered approach to client care should be the ultimate aim of a nutrition professional.
Aarti Batavia graduated from the Coordinated Program in Dietetics in May 2010. However, her career in the nutrition field began well before that when she received her BS and MS degrees in nutrition from the University of Mumbai and S.N.D.T University in India. After obtaining her graduate degree, she opened a private practice which grew to three locations. She relocated to Detroit in 2007 and the following year joined the CPD so that she could continue her work here as a Registered Dietitian. After graduating from WSU, Aarti became interested in studying more about Functional Medicine, food allergies, sensitivities and intolerances. In Jan 2011 she officially opened a private practice under the name Nutrition and Wellness Consulting LLC.

Aarti is actively involved with the Michigan and Southeastern Michigan Dietetic Associations, where she is a spokesperson for MDA and the Continuing Education Chair for SEMDA. With her new found passion in Functional Nutrition and adverse food reactions, she finds immense satisfaction in continuing to contribute towards raising nutrition awareness and promoting healthy lifestyles. Please visit Aarti’s website at www.AartiBatavia.com, and enjoy her article below.

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So, what is the difference between Food Allergies, Sensitivities and Intolerances?

By: Aarti Batavia M.S., R.D., C.L.T.

Food allergies, food sensitivities, and food intolerance are often used interchangeably, and often used inappropriately. In fact, there is active debate in scientific and medical circles as to how to properly define and use these three terms. The general consensus is that food allergy can be defined as any adverse reaction to food that involves our immune system. This further breaks down into two kinds of reactions, food allergy and food sensitivity.

**Food Allergy**

Perhaps the best-known example of food allergy is also its most rare - and most dangerous. Anaphylactic shock is a severe hyper-reaction of the immune system caused by a massive release of histamine and other chemical mediators from certain types of white blood cells called mast cells and basophils. The immunologic triggering mechanism that causes the mast cells and basophils to release their chemicals is called IgE and is a very well understood phenomenon. This underlying mechanism is considerably different than the triggering mechanisms found in food sensitivities. The most common foods implicated in food allergy are peanuts, other nuts, shellfish, or foods containing sulfites. People with anaphylaxis can die within minutes if they ingest even one molecule of their allergic food. Food allergy affects about 1-2% of the population and accounts for only a small percentage of all adverse food reactions. Most immediate reactions are not life threatening but do produce uncomfortable symptoms. People suffering from food allergy can usually identify what foods they are allergic to without the help of a doctor or testing. This is because the reaction occurs every time and shortly after they eat their allergic food.

**Food Sensitivities**

Food sensitivity (also known as delayed food allergy) is quite another story. Delayed reactions manifest in many different ways as they can affect any organ system in the body and can take from 45 minutes to several days for symptoms to manifest. The delayed onset of symptoms and complex physiological mechanisms involved in food sensitivities make them an especially difficult puzzle to try and solve either on your own or with laboratory serum tests. In fact, food sensitivities often go undiagnosed or misdiagnosed. The treatments prescribed usually provide only temporary relief that mask the symptoms instead of addressing the root cause of the problem.
**Fictional or Functional? Are there benefits to using Functional Foods?**

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**Wayne State University**

We are proud to present two distinguished talks on

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**New Strategies in Traditional Medicine**

Professor Emeritus Geoffrey A. Cordell obtained a Ph.D. in synthetic natural product chemistry at the University of Manchester. After joining the College of Pharmacy at the University of Illinois at Chicago he directed drug discovery programs, served as a Department Head and Interim Dean, and held several senior research administrative positions at the College and Campus levels; he retired in 2007.

He has over 620 publications, is the editor of 37 books, including 29 volumes of "The Alkaloids: Chemistry and Biology", and has lectured extensively around the world. He is a member of the Editorial Advisory Board of twenty-five scientific journals, is one of 14 Honorary Members of the American Society of Pharmacognosy, and is an Honorary Professor at Sichuan University, Chengdu, PRC.

After over 45 years studying the isolation, structure elucidation synthesis, and biosynthesis of natural products, his efforts are now focused on developing natural product research programs, where he serves as an advisor and consultant in several countries in various parts of the world. His interests include strategies for the sustainability and quality control of medicinal agents, the detection of biologically active natural products, the chemistry and biosynthesis of alkaloids, and the use of vegetables as chemical reagents.

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**Berries, the Micro-biome and inflammation**

Dr. Finley is Head and Professor of Food Science at Louisiana State University. He is leading a program focused on development of functional foods which deliver targeted health benefits and are of culinary quality. Programs to train regulatory scientists, Culinology and Energy efficient processing are being developed.

Dr. Finley has had a distinguished career in the food industry as a leader and innovator of new technologies. Dr. Finley came to A.M. Todd form Kraft Foods where he developed several low calorie technologies and satiety enhancing products. Fostered by his background at Monsanto John also served as an internal consultant in biotechnology. At Monsanto he was leader of the Food Science program which was focused on delivery of intense sweeteners and reduced calorie ingredient development. He also initiated a program to produce low calorie fats and fats with enhanced fatty acid profiles in conventionally bred and genetically engineered plants.

At Nabisco Dr. Finley assembled and served as leader for the Fundamental Science program which resulted in multiple innovations and technologies to support the Nabisco businesses. In that role he also was co-inventor and leader of the development program for Salatrim and low calorie fat.

Dr. Finley has authored over 100 technical publications, edited eleven books and holds 47 patents. Currently he is an associate editor for the Journal of Agricultural and Food Chemistry.

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Parking: Parking is available on campus. Cost: $3 (Dollar bills preferred).
Registration and Fees: No registration is required and there is no cost for participation.
Inquiry and Information: Telephone: (313) 577-2500