Putting Science Into Practice
Dietitians & Nutritional Genomics

Presented By:
Milly Ryan-Harshman, PhD, RD
Ellen Vogel, PhD, RD, FDC
December 1, 2005

A Presentation About:
The Interface Between Nutrition and Genes:
Nutritional Genomics and Dietetic Professional Practice

A Research Project Funded By:
Canadian Foundation for Dietetic Research
The Centrum Foundation

Nutrigenomics explores the effects of nutrients on genes, proteins and metabolic processes, whereas nutrigenetics determines the effect of individual genetic variation on the interaction between diet and disease. Our interest in this topic began with an informative, visionary and challenging presentation at the International Congress of Dietetics by Ruth DeBusk in May 2004. Ruth's presentation stimulated our thinking, leading us to question how much we knew about the readiness of Canadian dietitians to incorporate nutritional genomics into practice.

We filed a Letter of Intent with CFDR and created an excellent research team that includes:

Ellen Vogel, PhD, RD. FDC; Population Health; University of Ontario Institute of Technology

Milly Ryan-Harshman, PhD, RD; Nutrition; FEAST Enterprises

Julia Green-Johnson, PhD; Food Science; University of Ontario Institute of Technology

Holly Jones-Taggart, PhD; Genetics; University of Ontario Institute of Technology

David Castle, PhD; Ethics; University of Guelph

Zubin Austin, PhD; Pharmacy Practice & Interprofessional Education; University of Toronto

Kristin Anderson, RD, MPH; Policy Analyst; Manitoba Health

Our primary goal for this project is to increase awareness and understanding of new roles for registered dietitians in diet-gene interactions. A secondary goal is to identify opportunities and current gaps in knowledge, skills and resources, including public health policy, for enhancing dietetic practice, education and research related to nutritional genomics.

Six research questions were identified as important. They are:

1. What leading edge strategies are dietitians using to apply nutritional genomics to practice, education and research?

2. What do dietitians think about the impact of nutritional genomics on practice, education and research?

3. What are the current capacities of dietitians in applying nutritional genomics to practice, education and research?

4. What are the entry level and continuing education needs of dietetic professionals in the area of nutritional genomics?

5. What are the key ethical issues pertaining to dietitians' use of nutritional genomics information?

6. What are the potential policy implications for dietetic professionals resulting from the application of nutritional genomics to practice, education and research?

The methodology that will be used is qualitative in nature, an approach which lends itself well to research questions starting with "how" or "what". Results will be reported for key informant interviews with national and international expertise in areas related to nutritional genomics, ethics, public policy, education and professional practice. Results will also be reported regarding focus group interviews conducted with dietitians across Canada. We expect these results to provide insight into ethical issues such as the value of population screening and genetic tests and the psychosocial implications of identifying people by their risk profiles, and for practice-based issues such as university and continuing education competencies, interprofessional cooperation, and use of products to reduce risk for chronic disease.

Our timelines for this project are:

Literature Review	November 2005
Case Study	January 2006
Key Informant Interviews	February 2006
Case Study Pilot	May 2006
Preliminary Data Analysis	June 2006
Focus Groups	December 2006
Data Analysis Completed	June 2007
Final Report	August 2007