



Innovative agri-food and nutrition research for healthy aging

A-HA Annual Report

2009

This report will provide a snapshot of research and dissemination activities in 2009 of the Agri-food for Healthy Aging (A-HA) program. For details on any of the items included in this report, please contact Jessica Demeter at jdemeter@ria.uwaterloo.ca.

A Year In Review



A Message from Mike Sharratt



The Agri-food for Healthy Aging (A-HA) research program is quickly moving into the second year of operation at the Schlegel-UW Research Institute for Aging (RIA). Since April 2009, the A-HA team has been very productive in terms of research and dissemination activities as outlined in this Annual Report. We continue to build on these successes and look forward to further achievements and collaborations among our researchers with other agri-food and health sector stakeholders.

With expertise in the areas of applied nutrition and dietetics, nutritional science, food science and human health, researchers were brought together through the efforts of the RIA, the University of Waterloo, the University of Guelph and MaRS Landing. The addition of a program manager to coordinate research and dissemination efforts, along with the signing of a Memorandum of Understanding with the University of Guelph, helped get A-HA off and running.

With a mission to improve the quality of life for older adults through the innovative use of food, A-HA researchers have explored psychosocial dynamics of mealtime, dietary intake levels of omega-3 fatty acids from fish oil (DHA/EPA), and sensory evaluation of soy-based bread in retirement/long-term care settings.

All research projects that come through the RIA must meet our mandate of immediate translation of results. Although 2009 was mainly a jumping-off point for research activities, there were several successful dissemination activities completed. The RIA and A-HA partnered with the Guelph Food Technology Centre to deliver an innovation breakfast highlighting A-HA research in order to help food industry representatives realize food innovation opportunities that address the needs of older adults. In early November, A-HA partnered with the Royal Agricultural Winter Fair and the Journey To Your Good Health to host a day dedicated to sharing evidence-based information with Ontario's health professionals in an agricultural forum. Both of these events helped the A-HA program to share research findings and connect with key stakeholders.

On behalf of the A-HA program and the RIA, I am pleased to present the following 2009 Annual Report and thank all the researchers and supporting staff for their efforts in making 2009 a success. Should you have feedback for the A-HA group, please contact Program Manager, Jessica Demeter at jdemeter@ria.uwaterloo.ca.



Mike Sharratt, PhD

Executive Director, Schlegel-UW Research Institute for Aging (RIA)
Chair, Agri-food for Healthy Aging (A-HA)

Table of Contents

Introduction	3
Governance & People	4
A-HA Working Research Model	5
Research Themes.....	6
Research Scientists.....	7
Students	8
Externally Funded Grants.....	9
Peer-reviewed Research Articles	14
Presentations	15
Events.....	16
Stakeholder Connections	17
Knowledge Translation & Transfer.....	18
Future Directions	19

Introduction

The Agri-food for Healthy Aging (A-HA) initiative is a new collaborative research group created through the efforts of the Schlegel-University of Waterloo Research Institute for Aging (RIA), the University of Guelph (UofG), the University of Waterloo (UW), and MaRS Landing. A-HA's researchers hold expertise in the areas of applied nutrition and dietetics, nutritional sciences, food science, and human health. By exploring linkages between agriculture, food and human health, A-HA aims to realize innovative opportunities for Ontario's agri-food and health sectors.

Mission: Improve the nutrition, health and well-being of older adults through innovative agri-food research.

A-HA Goals

A-HA conducts innovative agri-food and nutrition research, emphasizing the linkages between agriculture, food and health through strategic partnership development and knowledge translation and transfer, such as the delivery of events and communications. A-HA research aims to ultimately impact on policy and programs that better meet the nutritional and sensory needs of older adults.

Services and Products

- Research
 - Primary research
 - Research facilitation, collaboration, and partnerships
 - Funding and grant writing (assisting others)
- Networking
 - Lobbying/advocacy
 - Conferences (attending)
- Knowledge Translation & Transfer (KTT)
 - Research results dissemination, traditional scientific journals and professional publications (A-HA's and external)
 - Repository of information and data
 - Conferences and training & education programs
 - Translating science and research into practice
- Policy and regulation development
 - Healthy eating promotion
- Commercialization of research

Current A-HA Objectives:

- Conduct research to improve nutrition of older adults and enhance the mealtime experience;
- Facilitate and promote the connections between agriculture, food, nutrition and healthy aging through partnership development with agri-food and health sector stakeholders;
- Provide caregivers, including health care professionals and families, with information regarding the nutritional health and well-being of older adults, and;
- Promote access to existing, and develop new, healthy agri-food options (i.e. functional foods) that meet the nutritional and sensory needs of older adults.

Governance & People

The A-HA Chair, Associate Chair and Program Manager support operational and administrative needs for the research scientists, while building strategic partnerships with agri-food and health sector stakeholders. The research scientists, along with the administrative staff meet quarterly to discuss research, activities, and new directions.

A-HA Team:

Chair	Mike Sharratt, PhD Executive Director, RIA
Associate Chair	Josie d'Avernas, MSc Associate Director, RIA VP Program Development & Innovation, Schlegel Seniors Villages
Program Manager	Jessica Demeter, MSc A-HA Program Manager, RIA

A-HA Support Team:

Research Support	Susan Brown, MSc Research Associate, RIA
Administrative Support	Kate Wilson Administrative Assistant, RIA

Currently, the team is working to assemble a volunteer advisory committee that can provide insight on current A-HA research & activities, as well as future directions for the program. There are two representatives to date, who have confirmed their involvement on the advisory committee.

A-HA Voluntary Advisory Committee:

Advisory Committee Member	Michelle Schurter Manager of Research & Innovation Branch, OMAFRA e. Michelle.Schurter@ontario.ca
Advisory Committee Member	Denise Zaborowski Manager of Domestic Marketing Unit, OMAFRA e. Denise.Zaborowski@ontario.ca

RIA & University of Guelph: Memorandum of Understanding

June 4, 2009 – Guelph, ON:

Dr. Ron Schlegel, Chair of the Schlegel-UW Research Institute for Aging (RIA), met with Dr. Alastair Summerlee, President of the University of Guelph (UofG), to sign a Memorandum of Understanding between the RIA and the UofG representing each party's financial commitment to jointly support the A-HA program.



*Photo taken by Jessica Demeter.

Meeting participants also included Dr. Mike Sharratt (Executive Director, RIA), Jessica Demeter (A-HA Program Manager, RIA), Michelle Schurter (Manager of the Research and Innovation Branch, OMAFRA), Joanne Shoveller (VP of Alumni Affairs, UofG), Robert Gordon (Dean of OAC, UofG), Kevin Hall (VP Research, UofG), Steven Liss (AVP Research, UofG), and Julia Christensen Hughes (Dean, College of Management and Economics, UofG).

A-HA Working Research Model

There are five research theme areas that have been identified for A-HA research and each of these themes can be seen in the schematic diagram in Figure 1: A-HA Working Research Model.

Figure 1: A-HA Working Research Model



Research Themes

Mealtime Environment – “Living to Eat”: This theme addresses the psychological aspects of food intake in older adults and is largely focused on determining how the mealtime environment influences food intake in older adults and developing interventions to promote enhanced food intake in seniors.

Enhancing Diets for Older Adults: The focus of this theme is to investigate how the food provided/consumed by older adults can be enhanced so that as much nutrition can be provided in a smaller volume of food. Fortification of nutrients or preparations of foods so that they have enhanced nutrient profiles are potential means of enhancing diets.

Managing Disease in Older Adults: This theme is focused on the nutrient basis to various chronic diseases and how diet can be used to manage these diseases. Chronic diseases that are relevant include cardiovascular disease, diabetes, cancer, osteoporosis, and arthritis. This theme will also focus on nutritional management of diseases and ailments that are highly prevalent in older adult populations, such as Alzheimer’s disease and related dementias, and macular degeneration.

Well-Being – “Eating to Live”: This is a broad-based research theme that encapsulates other themes (especially brain health and managing disease), but is distinguished from them in its ‘prevention’ focal point. In essence, this theme focuses on how nutrition in general and specific foods/nutrients can be used to promote longevity as well as quality of life in older adults. Examples of this type of research would be caloric restriction, vegetarian diets, or the Mediterranean diet.

Optimizing Brain Nutrition: This theme focuses on the various known and emerging nutrients linked to brain health (cognition and depression) in older adults. Nutrients that have specifically gained interest are folate, vitamin B12, vitamin B6 (homocysteine mechanism), and omega-3 fatty acids. This theme also addresses how balanced nutrition and the absence of malnutrition can promote cognition and mood.



Research Scientists

The A-HA Research Team consists of researcher scientists from UofG and UW, holding expertise in applied nutrition and dietetics, food science, nutritional science, and human health.

Research Scientist	Profile
<p>Lisa Duizer, PhD Assistant Professor, Food Science (FS) University of Guelph e. lduizer@uoguelph.ca</p>	<p>Lisa’s research interests focus primarily on the sensory evaluation of food, specifically involving perception of textures and tastes. She is interested in determining factors affecting perception of sweet tastes, and temporal perception of salt taste in reduced salt foods. As part of the A-HA Research Team, Lisa’s main focus will explore sensory perception and aging.</p>
<p>Alison Duncan, PhD, RD Associate Professor, Human Health & Nutritional Sciences (HHNS) Associate Director, Research – Human Nutraceutical Research Unit (HNRU) University of Guelph e. amduncan@uoguelph.ca</p>	<p>Alison’s longstanding interest in nutrition stems from a clinical perspective and has evolved to include a focus on the nutritional sciences. Her general research interests relate to the biological effects of functional foods and nutraceuticals on chronic disease-related endpoints through human intervention studies. Her research has focused on the role of soy and its constituent protein and isoflavones in the reduction of disease risk, including cardiovascular disease, diabetes, breast cancer and kidney disease.</p>
<p>Heather Keller, PhD, RD, FDC Professor, Family Relations & Applied Nutrition (FRAN) University of Guelph e. hkeller@uoguelph.ca</p>	<p>Heather’s research is primarily focused in the area of older adults. She has three research programs that span community and long-term care sectors. For A-HA Heather is focused on the determinants of food intake, especially psychosocial factors, understanding eating behaviour, and demonstrating the importance of nutrition to health and quality of life of older adults.</p>
<p>Ken Stark, PhD Assistant Professor, Kinesiology (KIN) Director, Laboratory of Nutritional and Nutraceutical Research University of Waterloo e. kstark@uwaterloo.ca</p>	<p>Ken’s research interests are focused on enhancing nutrients in the diets of older adults to reduce the burden of chronic disease, while remaining sensitive to the mealtime environment. Specifically, his research examines strategies to increase the intake of omega-3 fatty acids, particularly docosahexaenoic acid (DHA) in aging populations, which may prevent several age-related morbidities, including cognitive decline, cardiovascular disease, rheumatoid arthritis, depression and macular degeneration.</p>

Students

Name	Type of Student	Program & Institution	Advisor	Student Experience	Duration of Experience
Courtney Brooke	Undergraduate Thesis	FRAN, UofG	Heather Keller	-development of standardized social interaction measure for LTC homes	2 semesters (09/2009 – 05/2010)
Jenna Campbell	MSc Coursework	HHNS, UofG	Alison Duncan	-lit review -Innovation Breakfast planning, execution & wrap-up (Oct 28) -Health Professional's Day planning, execution & wrap-up (Nov 11)	3 semesters (09/2009 – 09/2010)
Payman Charkhzarin	MSc	KIN, UW	Ken Stark	-assisted on dietary assessment study -coauthor on paper	1 term (05/2007 – 09/2007)
Leah Curle	Undergraduate Thesis	FRAN, UofG	Heather Keller	-lit review -data collection, analysis -manuscript preparation	2 semesters (09/2008 – 05/2009)
Jennifer Fratesi	Undergraduate Thesis	KIN, UW	Ken Stark	-dietary assessment study -primary author on paper	3 terms (05/2007 – 04/2008)
Ryan Hogg	Undergraduate Research Assistant	KIN, UW	Ken Stark	-assisted on dietary assessment study -coauthor on paper	1 term (05/2007 – 08/2007)
Nila Ilhamto	Undergraduate Research Course & Research Assistant	BioMed, UofG	Lisa Duizer	-taste and olfactory ability of individuals with Alzheimer's Disease -helped plan and conduct research for omega-3 consumer testing -conducted soy bread consumer liking research	3 semesters (05/2009 – 04/2010)
Diane Kishi	Undergraduate Research Assistant	KIN, UW	Ken Stark	-data analysis of preliminary omega-3 enrichment study -design of follow-up study -primary author on submitted abstract	2 terms (09/2009 – 04/2010)
Zoe Martos	Undergraduate Thesis	BioMed, UofG	Heather Keller	-development of mealtime satisfaction questionnaire	2 semesters (09/2009 – 05/2010)
Ashley Patterson	PhD	KIN, UW	Ken Stark	-assisted on dietary assessment study -coauthor on paper -supervise undergraduates on omega-3 enrichment study -submitted abstract coauthor	6 terms (05/2007-04/2008, 01/2009 – 12/2009)
Alexandrea Peel	Undergraduate Research Assistant	KIN, UW	Ken Stark	-data collection of preliminary omega-3 enrichment study -submitted abstract coauthor	1 term (05/2009 – 08/2009)
Holly Reimer	PhD	FRAN, UofG	Heather Keller	-doctoral thesis -data manager for Eating Together Study -research assistant for Eating Together Study -data collection, analysis	09/2008 - present
Caitlin Way	MSc	FRAN, UofG	Heather Keller	-masters thesis -research assistant for Eating Together Study -data collection, analysis	09/2009 - present
Genevieve Young-Newton	Postdoctoral Fellow	KIN, UW	Ken Stark	-assisted on dietary assessment study -coauthor on paper	1 term (05/2007 – 08/2007)

Externally Funded Grants

Title of Proposal	Funding Source	Program Name	Researcher	Role	Total Amount (CDN\$)	Support Period
Unraveling the impact of in-mouth molecular interactions on sensory perception	Natural Sciences and Engineering Research Council of Canada (NSERC)	Discovery Grant	Duizer LM	Principal Investigator	\$259,200	*Requested 06/2010 – 06/2015
MAPP-MAL-Canada: The Canadian extension of the multidisciplinary approach to develop a prototype for the prevention of malnutrition in older people	Canadian Institutes of Health Research (CIHR)	Canada-UK Aging Initiative (2009)	Duizer LM	Co-applicant	\$244,582	*Requested 07/2010 – 07/2012
Matching expectation to reality for modified texture foods: Comparison of in-house to commercial pureed products	Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	Food for Health / Product Development & Enhancement Research Programs	Duizer LM	Primary Investigator	\$268,000	*Submitted 12/2009
Characterizing the sensory attributes of whole grain wheat-based products and phenolics associated with these attributes	OMAFRA	Product Development & Food for Health	Duizer LM	Principal Investigator	\$191,500	09/2009 – 08/2012
Salt, science and society – a collaborative approach to salt reduction in processed foods	Networks of Centres of Excellence (NCE)	Advanced Food and Materials Network (AFMNet)	Duizer LM	Network Investigator	\$640,000	06/2009 – 06/2011
Promotion of healthy aging with soybeans: evaluation of soy-based food intervention in older adults living in long-term care	OMAFRA	Food for Health Research Program	Duncan AM	Primary Investigator	\$287,000	*Requested 09/2010 – 09/2013
Metabolomics as a tool for managing diabetes	Canadian Diabetes Association	Operating Grant	Duncan AM	Co=applicant	\$279,400	*Requested 09/2010 – 09/2013
Lentils for diabetes and CVD in Aboriginals	Agriculture and Agri-Food Canada (AAFC)	Agri-Science Cluster Program	Duncan AM	Principal Investigator	\$263,438	*Requested 09/2010 – 02/2013

FFN: A Researcher and Practitioner Network	CIHR	Meeting and Dissemination Grant	Duncan AM	Co-applicant	\$11,035	09/2009 – 09/2010
Effect of varying dose and molecular weight on serum LDL cholesterol lowering properties of oat β -glucan	CreaNutrition (contract; multi-centre study)		Duncan AM	Principal Investigator	\$75,000	11/2008 – 07/2009
Enhancement of breads to optimize carbohydrate management in adults with type 2 diabetes	OMAFRA	Food Research Program	Duncan AM	Co-applicant	\$150,000	05/2008 – 05/2009
Enhancing the Nutritional Quality of Food for Healthy Aging	AFMNet	Discovery Grant	Keller HH	Co-principal Investigator	\$578,200	*Requested 2/2009
MAPP-MAL-Canada: The Canadian Extension of the multidisciplinary approach to develop a prototype for the prevention of malnutrition in older people	CIHR	Canada-UK Strategic Initiative – Institute of Aging (IA)	Keller HH	Principal Investigator	\$224,582	*Requested 02/2010 – 02/2013
Development and validation of the Toddler NutriSTEP: a nutrition risk screening tool for 18-36 months	CIHR	Operating Grant	Keller HH	Co-applicant	\$233,000	*Requested 04/2010 – 04/2012
The Effects and Costs of a Community-Based Nurse-Led Diabetes Prevention and Management Program for Frail Older Adults at Risk for Type 2 Diabetes: A Community-Based Partnership with Primary Care	Lawson Foundation (The)	2010-2011 Diabetes Funding Opportunity	Keller HH	Co-applicant	\$150,000	*Requested 03/2010 – 03/2012
Development and validation of a 10-item mealtime satisfaction questionnaire for the cognitively impaired	Alzheimer Society of Canada		Keller HH	Co-applicant	\$91,400	*Requested 04/2010 – 04/2011

Development and validation of food satisfaction questionnaire for the cognitively impaired for use in clinical trials assessing the impact of modified-texture food in long term and complex continuing	Alzheimer Society of Canada	Care Practice in Cognitive Impairment in Aging	Keller HH	Co-applicant	\$99,073	*Requested 03/2010 – 03/2011
Eating Together in families with dementia: project extension	Social Sciences and Humanities Research Council of Canada (SSHRC)	Operating Grant	Keller HH	Principal Investigator	\$148,000	04/2008 – 06/2011
Palatable puree: Improving weight status and quality of life among older persons needing dysphagic food products	Ontario Ministry of Health and Long-Term Care (MHLTC)	Ontario Research Coalition Senior Investigator Initiative	Keller HH	Co-applicant	\$30,000	04/2009 – 09/2009
The impact of personal characteristics and social factors on food choices and adaptive strategies for maintaining diet	CIHR	Operating Grant	Keller HH	Co-applicant	\$56,877	09/2008 – 07/2009
Targeted Implementation and Evaluation of NutriSTEP	Danone/Dannon Institute	Research Grant	Keller HH	Principal Investigator	\$70,000	06/2007 – 06/2009
Bruyère Weight Measuring Protocol	MHLTC		Keller HH	Co-applicant	\$35,000	04/2008 – 04/2009
The metabolism, handling and physiological impact of eicosapentaenoic and docosahexaenoic acid on cardiac tissue	CIHR	Operating Grant	Stark KD	Principal Investigator	\$210,000	*Requested 07/2010 – 07/2013
Development of an automated system for extracting nutrients and residues from food and animal tissue	NCE	AFMNet STAR / Commercialization	Stark KD	Principal Investigator	\$150,000	*Requested 05/2010 – 05/2011

Automation amendable to novel high throughput solid matrix nutrient and drug extraction methods	Ontario Centres of Excellence (OCE)	Collaborative Research Program	Stark KD	Principal Investigator	\$89,302	*Requested 12/2009 – 12/2010
Fatty Acid Determination in Food and Blood with Novel Automated Devices and High Throughput Methodologies	Ontario Ministry of Research and Innovation (MRI)	Early Researcher Award	Stark KD	Principal Investigator	\$150,000	04/2009 – 04/2014
Gender and Fatty Acid Metabolism	NSERC	Discovery Grant	Stark KD	Principal Investigator	\$136,255	05/2007 – 05/2012
GENESIS PRAXY: Gender and sex determinants of cardiovascular disease from bench to beyond in premature acute coronary syndrome	HSFC	Grant-in-aid	Stark KD	Co-applicant	\$620,062	04/2008 – 04/2011
Development of an automated system for derivitizing nutrients and drugs in food and blood samples	Health Technology Exchange (HTX)	Business Investment Program	Stark KD	Principal Investigator	\$223,161	10/2009 – 10/2010
Fatty acid research facility	Canadian Foundation for Innovation (CFI)	Infrastructure Operating Fund	Stark KD	Principal Applicant	\$54,000	09/2007 – 09/2010
Development of high throughput homogenizer for the extraction of nutrients, toxins and drugs from food and soil	OCE	Market Readiness	Stark KD	Co-applicant	\$272,610	08/2009 – 08/2010
GENESIS PRAXY: Gender and sex determinants of cardiovascular disease from bench to beyond in premature acute coronary syndrome	CIHR	Operating Grant	Stark KD	Co-applicant	\$100,000	07/2008 – 07/2009

Understanding the relationship between bloodstream fatty acid levels and functional abilities of individuals with arthritis	CIHR	Seed Grant: Mobility and Aging	Stark KD	Co-applicant	\$99,700	06/2008 – 06/2009
The evolution of compliance to nutraceutical, functional food and whole food strategies to increase omega-3 fatty acid intake	Canadian Foundation for Dietetic Research	Regular Research Grant	Stark KD	Principal Investigator	\$15,000	06/2007 – 06/2009
GENESIS PRAXY: Gender and sex determinants of cardiovascular disease from bench to beyond in premature acute coronary syndrome	HSFC	Desjardins Securite Financiere Award (Quebec)	Stark KD	Co-applicant	\$10,000	04/2008 – 04/2009

Peer-Reviewed Research Articles

Researcher	Publication
Duizer LM	Chen W, Duizer L , Corredig M, Goff HD. Addition of soluble soybean polysaccharides to dairy products as a source of dietary fiber. *Submitted to Journal of Food Science. 2009.
	Flett KL, Duizer L , Corredig M, Goff HD. Perceived Creaminess and Viscosity of Aggregated Particles of Casein Micelles and κ -Carrageenan. *Submitted to Journal of Food Science. 2009.
	Duizer LM , Robertson T, Han J. Requirements for packaging from an aging consumer's perspective. Packaging Technology and Science. 2008;22(4):187-197.
Duncan AM	Beaton LK, Dillingham BL, McVeigh BL, Lampe JW, Duncan AM . Soy protein isolates of varying isoflavones content do not adversely affect semen quality in healthy young men. Fertility and Sterility. 2009 Oct (E-pub ahead of print).
	Gopert CP, Pipe EA, Capes SE, Darlington GA, Lampe JW, Duncan AM . Soy protein does not affect glycemic control in adults with type 2 diabetes. British Journal of Nutrition. 2009;26:1-10 (E-pub ahead of print).
	Pipe EA, Gobert CP, Capes SE, Darlington GA, Lampe JW, Duncan AM . Soy protein reduces serum LDL cholesterol, LDL cholesterol/HDL cholesterol and apolipoprotein B/apolipoprotein A-I in adults with type 2 diabetes. Journal of Nutrition. 2009;139:1700-6.
	Gobert CP, Duncan AM . Consumption, perception and knowledge of soy among adults with type 2 diabetes. Journal of the American College of Nutrition. 2009;28:203-18.
	Hanwell HEC, Kay CD, Lampe JK, Holub BJ, Duncan AM . Acute Fish Oil and Soy Isoflavone Supplementation Increase Postprandial Serum (n-3) Polyunsaturated Fatty Acids and Isoflavones But Do Not Affect Triacylglycerol or Biomarkers of Oxidative Stress in Overweight and Obese Hypertriglyceridemic Men. Journal of Nutrition. 2009;139:1-7.
	Pullman AW, Masters RC, Zalot LC, Carde LE, Saraiva MM, Dam Y, Randall Simpson JA, Duncan AM . Effect of the Transition from High School to University on Anthropometric and Lifestyle Variables in Males. Applied Nutrition Physiology and Metabolism. 2009;34:1-10.
	Shao S, Duncan AM , Yang R, Marcone MF, Rajcan I, Tsao R. Tracking isoflavones: from soybean to soy flour, soy protein isolates to functional soy bread. Journal of Functional Foods. 2009;1:119-27.
Keller HH	Reimer H, Keller HH , Maitland S, Read J. Nutrition screening index for older adults (SCREEN II©) demonstrates sex and age invariance. *Submitted to the Journal of Nutrition for the Elderly. June 2009.
	Cassaloto C, Keller HH , Dupuis S, Schindel Martin L, Edward HG, Genoe R. The meaning and experience of eating out for families living with dementia. *Submitted to Leisure Science. May 2009.
	Reimer H, Keller HH , Tindale J. Learning you are at nutrition risk: senior's experiences of nutrition screening. *Submitted to Journals of Gerontology, Series B. May 2009.
	Reimer H, Keller HH , Tindale J. Barriers to change: senior's reasons for not following nutrition recommendations after screening. *Submitted to the Canadian Journal of Dietetic Practice and Research. May 2009.
	Hutton B, Lam PP, Keller HH , Fergusson D, Carter M, Lemire N, Caisse D, Chambers L. Approaches to preparation or presentation of modified textured foods in the elderly to improve weight and nutritional status: systematic review. *Submitted to the Journal of Nutrition, Health and Aging. May 2009.
	Bocock MA, Keller HH . Hospital diagnosis of malnutrition: A call for action. Can J Diet Pract Res. 2009;70(1):37-41
	Bocock MA, Keller HH , Brauer PM. Defining malnutrition risk for older home care clients. Can J Diet Pract Res. 2008;69(4):171-76.
	More C, Keller HH . Community Nutrition Policy for Seniors in Canada. Can J Diet Pract Res. 2008;69(4):198-200.
	Keller HH , Smith D, Kasdorf C, Dupuis S, Schindel Martin L, Edward HG, Cook C, Genoe R. Nutrition education needs and resources for dementia care in the community. American Journal of Alzheimers Disease and Related Dementias. 2008;Feb/March:13-22.
	Keller HH , Smith D, Kasdorf C, Dupuis S, Schindel Martin L, Edward HG, Cook C, Genoe R. Nutrition education needs and resources for dementia care in the community. American Journal of Alzheimers Disease and Related Dementias. 2008;Feb/March:13-22.
Stark K	Metherel AH, Armstrong JM, Patterson AC, Stark KD . Assessment of various blood measures of n-3 polyunsaturated fatty acids with acute fish oil supplementation and washout in men and women. Prostaglandins, Leukot Essent Fatty Acids. 2009;81:23-29.
	Kitson AP, Patterson AC, Izadi H, Stark KD . Pan-frying salmon in eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) enriched margarine prevents EPA and DHA loss. Food Chem. 2009;114:927-932.
	Fratesi JA, Hogg RC, Young-Newton GS, Patterson AC, Charkhzar P, Block Thomas K, Sharratt MT, Stark KD . Direct quantitation of omega=3 fatty acid intakes of Canadian residents of a long-term care facility. Appl. Physiol. Nutr. Metab. 2009;34:1-9.
	Patterson AC, Stark KD . Direct determinations of the fatty acid composition of daily dietary intakes incorporating nutraceuticals and functional food strategies to increase n-3 highly unsaturated fatty acids. J Am Coll Nutr 2008;27:538-546.

Presentations

Researcher	Presentation Title	Conference Title	Location	Date
Duizer LM	Getting the Most Out of our Senses as We Age	Royal Agricultural Winter Fair's Health Professional's Day	Toronto, ON	11/11/2009
	FAN Panel: Exploring Research and Food Needs of Older Adults and Opportunities for Ontario's FFNHP Sectors	Agri-food for Healthy Aging Innovation Breakfast	Guelph, ON	10/28/2009
	Sensory Science at the University of Guelph	Grand Opening of the Human Nutraceutical Research Unit	Guelph, ON	04/20/2009
Duncan AM	The Role of Soy in Diabetes Management	Latin American Congress	Santiago, Chile	11/17/2009
	Functional Foods for Healthy Aging	Royal Agricultural Winter Fair's Health Professional's Day	Toronto, ON	11/11/2009
	How Linking Agriculture and Food can Impact Nutrition and Health Research in Older Adults	Agri-food for Healthy Aging Innovation Breakfast	Guelph, ON	10/28/2009
	The Natural Controversy	Canadian Institute of Food Science and Technology (CIFST)	Toronto, ON	10/21/2009
	Soy and Human Health: A Research Update	Soy Foods Canada Annual General Meeting	Toronto, ON	10/05/2009
	Soy and Breast Cancer: A Review of the Evidence	Health Canada	Ottawa, ON	03/27/2009
	Effect of Pulse Consumption on Gastrointestinal Response, Intestinal Microbiota, and Serum Lipids in Healthy Adults	The Pulse Food Symposium	Toronto, ON	02/04/2009
Keller HH	Aging Well with Nutrition: What to Eat and How to Eat It.	Royal Agricultural Winter Fair's Health Professional's Day	Toronto, ON	11/11/2009
	Food and Older Adults: Opportunities and Challenges for the Future	Agri-food for Healthy Aging Innovation Breakfast	Guelph, ON	10/28/2009
	Social Interactions Among Mealtime Tablemates in Assisted Living	Schlegel Seniors Villages Directors of Food Services Meeting	Kitchener, ON	09/20/2009
	Eating Together: Strategies used by families living with dementia to promote connection and identity	Care to Know Symposium on Knowledge Translation	Toronto, ON	
	Nutrition and Seniors Research	Waterloo-Wellington Local Health Integration Network (WWLHIN) Community Council	Guelph, ON	
	Stark KD	The development and sensory assessment of novel foods enriched with n-3 fatty acids that are suitable for use in long-term care residences	Ontario Exercise Physiology Conference	Barrie, ON
Enriching the diets of retirement community residents with functional foods: an omega-3 example		Agri-food for Healthy Aging Innovation Breakfast	Guelph, ON	10/28/2009
Comparison of n-3 fatty acid status via blood biomarker and dietary intake in elderly, middle-age and young adult populations.		The 100 th American Oil Chemists' Society Annual Meeting & Expo	Orlando, FL	05/2009
Intakes and blood levels of omega-3 polyunsaturated fatty acids of Canadian elderly are lower than estimates associated with protection from cognitive decline in aging		Agri-Food Innovation Forum	Toronto, ON	02/10/2009

Events

Guelph Food Technology Centre Innovation Breakfast Series

Agri-food for Healthy Aging: Opportunities for Ontario's FFNHP Sectors

Oct 28, 2009

Guelph, ON

Partners: Guelph Food Technology Centre (GFTC),
FANbase Ontario
RIA, A-HA

Sponsors: OMAFRA
Toronto Region Research Alliance (TRRA)
MaRS Discovery District (MaRSDD)

Speakers: Barb Dillingham, FFNHP Sector Specialist, GFTC
George Zegarac, Deputy Minister, OMAFRA
Jessica Demeter, A-HA Program Manager, RIA
Dr. Heather Keller, Professor – FRAN, UofG
Dr. Alison Duncan, Associate Professor – HHNS, UofG
Dr. Mike Sharratt, Executive Director, RIA
Dr. Lisa Duizer, Assistant Professor – FS, UofG
Jill Estioko, Director Food & Hospitality, Schlegel Seniors Villages
Carolyn O'Brien, Manager, Regulatory Affairs, Canada Bread Company
Anne Kraus, Technical Advisor, KPMG
Dr. Ken Stark, Assistant Professor – KIN, UW

Health Professional's Day at the Royal Agricultural Winter Fair

Food for Healthy Aging

Nov 11, 2009

Toronto, ON

Partners: RIA, A-HA
Journey To Your Good Health (JTYGH)
Royal Agricultural Winter Fair (RAWF)
Dietitians of Canada (supporter)

Sponsors: Council for Biotechnology Information (CBI)
Weetabix
Ontario Ginseng Innovation & Research Consortium (OGIRC)
Clover Leaf
Campbell's
Dempster's Healthy Way
Canadian Partnership for Consumer Food Safety Education (CPCFSE)

Speakers: Lois Ferguson, Manager JTYGH, RAWF
Dr. Ron Schlegel, Chairman & CEO, Schlegel Seniors Villages
Dr. Heather Keller, Professor – FRAN, UofG
Dr. Alison Duncan, Associate Professor – HHNS, UofG
Dr. Lisa Duizer, Assistant Professor – FS, UofG
Dr. Alex Jadad, Founder, Centre for Global E-Health Innovation

Please refer to <http://aha.the-ria.ca> for event details...



Stakeholder Connections

The following is a list of key connections made in 2009.

- 1) Cindy Scythes, Manager, Nutrition Resource Centre (an initiative of the Ontario Public Health Association).
- 2) Vincent Guyonnet, VP – Research, Burnbrae Farms Ltd.
- 3) Carolyn O’Brien, Manager of Regulatory Affairs, Maple Leaf Foods
- 4) Denise Zaborowski, Manager – Domestic Marketing Unit, Foodland Ontario, OMAFRA
- 5) Simon Berge, Research Analyst - Research & Innovation Branch, OMAFRA
- 6) Duff MacKinnon, Research Analyst – Research & Innovation Branch, OMAFRA
- 7) Hilary Tulk, Clinical Trials Manager, Human Nutraceutical Research Unit (HNRU)
- 8) Jane Dummer, RD, Nutrition Consultant
- 9) Linda Hawkins, Executive Director, Centre for Families, Work and Well-Being (CFWW)
- 10) Melissa Kwiatkowski, Planner – Health System Design & Transformation, WWLHIN
- 11) Lois Ferguson, Manager – Journey To Your Good Health, Royal Agricultural Winter Fair (RAWF)
- 12) Janet Whitney, Director of Corporate Partnership, RAWF
- 13) Sue Mah, RD, Nutrition Solutions (member of the Dietitians of Canada)
- 14) Dennis Guy, For Public Consumption (formerly Primacy TV)
- 15) Tyler Whale, Technology Transfer Manager, University of Guelph Business Development Office (BDO)
- 16) Sam Lee, Director Bio Life Sciences, Toronto Region Research Alliance (TRRA)
- 17) Veronika Litinski, Director of the MaRS Venture Group, MaRS Discovery District
- 18) Gopi Paliyath, Research Program Director – Food for Health, University of Guelph
- 19) Justin Policarpio, Research Analyst and Communications Officer, Golden Horseshoe Biosciences Network (GHBN)
- 20) Sara Sarkar, Senior Market Development Officer – FFNHP, Agriculture and Agri-Food Canada (AAFC)
- 21) Joanne Suttleworth, Reporter, The Guelph Mercury

All of the contacts listed above have been involved in the planning of an event, dissemination of information, and/or is interested in helping to communicate research results in the future.

Knowledge Translation & Transfer

Marketing Materials & Resources:

The following marketing and promotional materials have been created:

- A-HA banner
- RIA banner
- A-HA slide deck (used in meetings, at both A-HA events, etc)
- ‘*Functional Foods for Healthy Aging*’ chart
 - *Distributed at the Innovation Breakfast and Health Professional’s Day, and was featured in the Functional Foods booth at the JTYGH at RAWF*
- ‘*Functional Foods for Healthy Aging*’ display – created for the Innovation Breakfast
- Video of Alison Duncan – prepared for promotional email blast for the Innovation Breakfast (posted on the A-HA website)
- Audio webcast of the Innovation Breakfast presentations
- Health Professional’s Day promotional flyer

The following marketing and promotional materials are still in development:

- Annual newsletter
- Email blast template

As part of A-HA’s goal of successful information sharing, a contact database of agri-food and health sector stakeholders is being developed. Participants at the A-HA events were encouraged to sign up to receive research updates, event postings, and other information as it relates to the A-HA program. To date, the database has 145 interested recipients, and continues to grow.

Website:

Developing the A-HA website (<http://aha.the-ria.ca>) has been one of the primary goals of 2009 in terms of A-HA’s KTT effort. Maintenance of the website occurs weekly (sometimes daily) to ensure that up-to-date research news items and event postings are present. Also available on the A-HA website are research presentations and publications.

In an effort to streamline the information sharing process when it comes to externally-produced public news and/or research results, A-HA has joined Twitter. “Tweeting” about external research, news, and events that relate to agriculture, food and nutrition is done on a daily basis, reaching 32 direct “followers”. It is estimated that A-HA messages could potentially reach more than 20,000 indirect followers or “tweeters” from all over the world.

Future Directions

For 2010, A-HA will continue to develop the following activities:

- Seek partnerships to facilitate sustainable funding.
- Enhance research profile through grants and publications.
- Translate research findings to practice in congregate and community settings.
- Develop communications plan, including regular communications via A-HA's electronic mailing list, and a hard-copy newsletter to distribute at meetings and events.
- Build on the success of 2009's Health Professional's Day at the Royal Agricultural Winter Fair, develop a 2nd annual event with the same 'Food for Healthy Aging' theme.
- Host an 'A-HA Research Day' to communicate the past year's research findings and encouraging networking among stakeholders.
- Determine a strategy to engage young researchers and students in the area of healthy aging.