

7th NHP RESEARCH CONFERENCE: THE NEXT WAVE

May 23rd, 2010

- 5:00 PM **Posters Set Up**
- 7:00 PM **Exhibitor Set Up**
- 7:00 PM **NHPRS Opening Reception**

May 24th, 2010

- 8:00 AM **Registration Open**
- 8:30 AM **WELCOME BY NHPRS PAST-PRESIDENT & CONFERENCE CHAIR**
Ann Eastman, Innovation & Climate Action, BC Ministry of Agriculture & Lands
- 8:40 AM **SIGNIFICANT PROGRESS ON THE REGULATION OF NATURAL
HEALTH PRODUCTS IN CANADA**
Michelle Boudreau, Natural Health Products Directorate, Health Canada
- 9:10 AM **THE NEXT WAVE: Growing NHPs**
Chair: Dr. Praveen Saxena, University of Guelph
- BOTANICALS FOR METABOLIC SYNDROME AND INFLAMMATION**
Ilya Raskin, Rutgers University
- 10:00 AM Break
- 10:30 AM **Session 1. Plant Production and Product Development**
Chair: Yves Desjardins, Laval University
- ARCTIC BERRIES: STRESSED FOR SUCCESS**
Mary Ann Lila, North Carolina State University
- NOVEL METHOD FOR THE ANTIOXIDANT ENRICHMENT OF
CRANBERRY JUICE: ELECTRODIALYSIS WITH FILTRATION
MEMBRANE**
Laurent Bazinet, Institut des Nutraceutiques et des Aliments Fonctionnels (INAF)
- PROSPECTS AND LIMITATIONS FOR AYURVEDIC PRODUCTS IN
CANADA: TULSI (*OCIMUM SANCTUM*) AS A CASE STUDY**
Praveen K. Saxena, University of Guelph, Guelph

10:30 AM

Session 2. Clinical Methodology & Epidemiology

Chair: Alison Duncan, University of Guelph

THE NATIONAL INSTITUTES OF HEALTH (NIH) SPONSORED A SCIENTIFIC WORKSHOP, "SOY PROTEIN/ISOFLAVONE RESEARCH: CHALLENGES IN DESIGNING AND EVALUATING INTERVENTION STUDIES," JULY 28-29, 2009.

Marguerite A. Klein, Office of Dietary Supplements, NIH

CLINICAL TRIALS AT THE HUMAN NUTRACEUTICAL RESEARCH UNIT AT THE UNIVERSITY OF GUELPH: OPPORTUNITIES AND CHALLENGES

Alison M. Duncan, University of Guelph

SAFETY AND EFFICACY ISSUES IN FEDERAL CLINICAL TRIALS APPLICATION ASSESSMENTS

Katherine D. Neufield, Natural Health Products Directorate, Health Canada

SYSTEMATIC REVIEW OF RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED CLINICAL TRIALS OF DAILY DOSING OF A NORTH AMERICAN GINSENG EXTRACT (CVT-E002)

Sharla K. Sutherland, Afeza Life Sciences Inc.

12:00 AM

Lunch

1:30 PM

Session 3. *Rhodiola rosea*: Field to Medicine Cabinet

Chair: Susan Lutz, AAFC

TRAVELING WITHIN THE *RHODIOLA ROSEA* TERRITORY: TAXONOMY TO ETHNOBOTANY

Alain Cuerrier, Jardin botanique de Montréal

POTENTIAL AND ATTAINABLE YIELD OF CULTIVATED *RHODIOLA ROSEA* IN ALBERTA

Kwesi Ampong-Nyarko, Alberta Agriculture and Rural Development Alberta

POST HARVEST PROCEDURES OF *RHODIOLA ROSEA* IN FINLAND

Bertalan Galambosi, MTT Agrifood Research Finland, Plant Production Research

TRADITIONAL USE, CHEMICAL COMPOSITION, PHARMACOLOGY, AND CLINICAL EFFICACY OF *RHODIOLA ROSEA* L.

Alexander Panossian, Swedish Herbal Institute Research & Development, Spårvägen 2, SE-432 96 Åskloster, Sweden

**DEVELOPMENT OF A RHODIOLA ROSEA BASED HERBAL
MEDICINE FOR STRESS: VITANGO® - A CASE STUDY**

Jochen Muehlhoff, Dr. Willmar Schwabe GmbH & Co. KG

1:30 PM

Session 4. NHPs & Cancer

Chair: Emma Tomlinson Guns, The Vancouver Prostate Centre

**POMEGRANATE FRUIT EXTRACT EXERTS ITS
ANTIPROLIFERATIVE, PROAPOPTOTIC EFFECT ON PROSTATE
CANCER CELLS THROUGH PATHWAYS INDEPENDENT OF
EPIGENETIC MODIFICATIONS**

Mitai Pandey, The Vancouver Prostate Centre

**NATURAL EXTRACTS AND COMPOUNDS FROM SPIDER LILY,
DANDELION AND TURMERIC: SELECTIVE INDUCTION OF
APOPTOSIS IN CANCER CELLS**

Siyaram Pandey, University of Windsor

**EVALUATING THE EFFICACY OF A NOVEL SYNTHETIC
DERIVATIVE OF PANCRATISTATIN AND ITS SYNERGISM WITH
CURCUMIN AND DANDELION ROOT EXTRACT IN INDUCING
APOPTOSIS IN CANCER CELLS**

Dennis Ma, University of Windsor

**PANCRATISTATIN SELECTIVELY INDUCES APOPTOSIS IN CANCER
CELLS AND REDUCES GROWTH OF COLON XENOGRAFTS**

Carly Griffin, *University of Windsor*

**EGCG-ENRICHED TEA DRINK: CATECHIN STABILITY AND IN-
VITRO ANTI-CANCER ACTIVITY**

Laurent Bazinet, Université Laval

3:00 PM

Break

3:30 PM

**Session 5. Methods, Metabolomics & Multivariate
Analysis**

Chair: Joseph Betz, ODS, NIH

**PROFILING POLYPHENOLS IN BROWN SEAWEED BY LIQUID
CHROMATOGRAPHY – HIGH RESOLUTION MASS SPECTROMETRY**

Aaron Steevensz, NRC Institute for Marine Biosciences

METHODOLOGIES OF GINSENG SPECIES DIFFERENTIATION

Stan Wang, Afexa Life Sciences Inc.

SPECTRAL FINGERPRINTS ACQUIRED BY MS, NMR IR UV CAN DIFFERENTIATE BETWEEN PANAX SPECIES, GROWING LOCATION AND POST-HARVEST TREATMENT

James Harnly, Food Composition and Methods Development Lab, U.S. Department of Agriculture

NMR-BASED METABOLOMIC PROFILING OF *VACCINIUM MACROCARPON* AITON

Paul R. Shipley, University of British Columbia Okanagan

USE OF ELEMENTAL PROFILES WITH MULTIVARIATE DATA ANALYSIS TO DIFFERENTIATE OKANAGAN MERLOT GRAPES

Jamie Finley, British Columbia Institute of Technology

3:30 pm

Session 6: Diabetes & Metabolism

Chair: Peter Jones, Richardson Centre, Manitoba

COMBINED HYPOGLYCEMIC, HYPOCHOLESTEROLEMIC AND HYPOTENSIVE EFFECTS OF *GYMNEMA SYLVESTRE* LEAVES IN NEWLY DIAGNOSED TYPE II DIABETIC SUBJECTS – A PILOT STUDY

Aparna Kuna, Agricultural University, Hyderabad, India (Given by Peter Jones)

WEIGHT-LOWERING EFFICACY AND MECHANISM OF ACTION OF A PROPRIETARY HERBAL FORMULATION IN A RAT MODEL OF OBESITY

Ben Perry, National Research Council Canada – Institute for Nutrisciences and Health

SAFETY AND LIPID-LOWERING EFFICACY OF LIP-01 IN EXPERIMENTAL ANIMALS

Vinti Goel, Afexa Life Sciences Inc.

CELIAC DISEASE IN PEI. IS THERE AN EPIDEMIC IN OUR OWN BACKYARD?

Carolanne M. Nelson, Dept of Family and Nutritional Sciences, University of PEI

5:00 PM

POSTER SESSION

6:00 PM

Day 1 Conference Close

May 25th, 2010

8:00 AM

Registration Open

8:30 AM **THE NEXT WAVE: Biomarkers of Health Status**

Chair: Susan Murch, UBC Okanagan & President NHPRS

ROLES OF OMEGA-3 FATTY ACIDS IN CANCER PREVENTION AND TREATMENT OPTIONS

Kelly A. Meckling, University of Guelph

ANALYTICAL CHEMISTRY OF VITAMIN D IN CLINICAL SAMPLES: STATE OF THE ART AND CURRENT CHALLENGES

John H Cardellina II, Office of Dietary Supplements, NIH

10:00 AM Break

10:30 AM **Session 7. NHPs in Neurology**

Chair: Susan J. Murch, UBC Okanagan

IBOGAINE THERAPY: FROM ETHNOMEDICINE TO NEW DRUG APPLICATIONS

Deborah C. Mash, University of Miami Miller School of Medicine.

COGNITIVE, EMOTIONAL AND PSYCHOSOCIAL EFFECTS OF HT1001™, A NORTH AMERICAN GINSENG EXTRACT, IN HEALTHY ADULTS: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED CLINICAL TRIAL

Scot E. Purdon, Department of Psychiatry, University of Alberta

SCREENING OF INHIBITORS FOR B-AMYLOID (AB) AND HUMAN ISLET AMYLOID POLYPEPTIDE (IAPP) AGGREGATION FROM ATLANTIC CANADA PLANT EXTRACTS

Jianhu Liu, Institute for Nutrisciences and Health, NRC Canada.

NOVEL ACETYLCHOLINESTERASE (ACHE) INHIBITORS FROM SENECCIO JACOBAEA

Junzeng Zhang, Institute for Nutrisciences and Health, NRC Canada.

10:30am **Session 8: Advances in OMEGA-3s**

Chair: Kelley Fitzpatrick, Richardson Centre for Functional Foods & Nutraceuticals

FOCUS ON OMEGA 3'S – AN OVERVIEW

Kelley C. Fitzpatrick, Richardson Centre for Functional Foods & Nutraceuticals

ENDOGENOUSLY PRODUCED OMEGA-3 POLYUNSATURATED FATTY ACIDS MODIFY IMMUNE RECEPTOR SIGNALING

Marianna Kulka, National Research Council – INH, University of Guelph, ON

COMPOSITION AND ANTI-INFLAMMATORY PROPERTIES OF FATTY ACIDS IN PEI BLUE MUSSELS

Yanwen Wang, National Research Council Canada – Institute for Nutrisciences and Health

ANTIOXIDANT PROTECTION OF OMEGA-3 FATTY ACIDS BY BIOACTIVE APPLE FLAVONOIDS

H.P. Vasantha Rupasinghe, Tree Fruit BioProduct Research Program

12:00 PM

Lunch

NHPRS Annual General Meeting

1:30 PM

Session 9: Pharmacognosy & Pharmacology

Chair: Tannis Jurgens, Dalhousie University

ATTENUATION OF ARSENIC INDUCED GENOTOXICITY AND OXIDATIVE STRESS BY ANDROGRAPHIS PANICULATA LEAF EXTRACT

Surjyo Jyoti Biswas, Midnapur College, West Bengal, India

INSECTICIDAL METABOLITES FROM THE GREEN ALGA CAULERPA RACEMOSA

Zeinab S. Abou- Elnaga, Mansoura University, Egypt.

AN IN VITRO AND IN VIVO STUDY ON THE EFFICACY OF AEGLE MARMELOS AGAINST SALMONELLA TYPHI.

Neeraj Khullar, Panjab University, Chandigarh, India

PHARMACOLOGICAL TREATMENTS WITH FLAXSEED OIL INDUCES APOPTOSIS IN B16-BL6 CELLS

Alison Buckner, Biomolecular Sciences-Laurentian University

SELECTIVE INDUCTION OF APOPTOSIS THROUGH ACTIVATION OF CASPASE-8 IN HUMAN LEUKEMIA CELLS (JURKAT) BY DANDELION EXTRACT

Pamela Ovadje, Department of Chemistry & Biochemistry, University of Windsor

DIFFERENTIAL EFFECTS OF FLAXSEED OIL ON CELL GROWTH BETWEEN MALIGNANT AND NON-MALIGNANT CELL LINES

Sudipa June Chatterjee, University of Windsor, Windsor

1:30 PM

Session 10. Policy & Practice

Chair: Steven Dentali, AHPA

NATURAL HEALTH PRODUCTS REGULATIONS IN CANADA

Sara O'Connor, Natural Health Products Directorate, Health Canada

PRE- AND POSTMARKET APPROACHES TO ADVERSE EVENT INVESTIGATIONS

Joseph M. Betz, Office of Dietary Supplements, U.S. National Institutes of Health

GOOD MANUFACTURING PROCESSES (GMP) FOR BOTANICAL-BASED SUPPLEMENTS: THE ROLE OF ANALYTICAL METHODS IN REGULATORY COMPLIANCE

Ikhlas Khan, University of Mississippi

APPLICATION OF RISK-BENEFIT ANALYSIS IN NUTRITION AND NATURAL HEALTH PRODUCT POLICY

Andrew Shao, Council for Responsible Nutrition

3:00 PM Break

3:30 PM **Health Canada Bilateral Meeting**

THE RESEARCH-REGULATION INTERFACE

Chair: Robin Marles, Natural Health Products Directorate, Health Canada

EXPERIENCES OF THE NATIONAL CENTRE FOR NATURAL PRODUCTS RESEARCH FDA PROGRAM

Ikhlas Khan, University of Mississippi

BRIDGE-BUILDING BETWEEN INDUSTRY AND THE NHP RESEARCH COMMUNITY

Gary Leong, Jamieson Laboratories Ltd.

THE ROLE OF RESEARCH & EDUCATION IN SUPPORTING COMPLIANCE & ENFORCEMENT OF NHP REGULATIONS

Paula Brown, BCIT

WHAT ROLE CAN NHPRS PLAY IN ALIGNING RESEARCH PRIORITIES FOR GOVERNMENT, INDUSTRY & ACADEMIA

Susan Murch, NHPRS

AFMNET: CREATING PARTNERSHIPS BETWEEN RESEARCHERS & INDUSTRY

Rickey Yada, AFMnet

TOWARDS THE FUTURE: THE ROLE OF RESEARCH IN SUPPORTING REGULATIONS

Robin Marles, Natural Health Products Directorate, HC

- 4:30 PM Open Discussion
- 5:00 PM POSTER SESSION
- 7:00 PM **NHPRS & Jamieson Dinner & Student Award Ceremony**
Keynote Address: Robert Orr, ONC
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May 26th, 2010

- 8:00 AM **Registration Open**
- 8:30 AM **THE NEXT WAVE: Product Innovations**
Chair: Paula N. Brown, BCIT
- PART 1: BERRY GOOD**
- 8:30 AM **CRANBERRY BIOACTIVES: POTENTIAL BENEFITS FOR CANCER AND OTHER DISEASES OF AGING**
Catherine C. Neto, University of Massachusetts Dartmouth
- 9:00 AM **HEART HEALTH FUNCTIONALITY OF CRANBERRIES AND BLUEBERRIES**
Marva I. Sweeney, University of PEI
- 9:30 AM **BLUEBERRIES AND HEALTH: INSIGHTS AFTER MORE THAN A DECADE OF RESEARCH**
Wilhelmina Kalt, Atlantic Food and Horticulture Research Centre, AAFC
- 10:00 AM BREAK
- PART 2: FROM LAB TO LUNCHBOX**
- 10:30 AM **PROBIOTIC SCIENCE: FROM LAB TO CONSUMER AND BACK**
Gregor Reid, Canadian R&D Centre for Probiotics, Lawson Health Research Institute
- 11:00 AM **PRODUCTS FOR THE BREADBOX**
Susan J. Murch, UBC Okanagan
- 11:30 AM **RESEARCH TARGETED TOWARD COMMERCIALIZATION: APPLICATION OF THE “FIELD-TO-MEDICINE-CABINET” CONCEPT**

Hugh A. Semple, Alberta Innovates – Technology Futures

12:00 AM LUNCH

PART 3: MILK & COOKIES

1:30 PM **CAN MILK ACTUALLY BE HEALTHIER?**
Milena Corredig, *University of Guelph, Guelph,*

2:15 PM **FROM CONFECTIONARY TO CARDIOVASCULAR HEALTH**
Brian Schaneberg, *Mars Botanical*

3:00 PM BREAK

3:30 PM **NHPRS & AFMNet JOINT SESSION**
Chair(s): Peter Jones, Richardson Center for Functional Foods
Rebecca Robertson, BCIT

5:00 PM **NHPRS & AFMNet JOINT RECEPTION**