

2014 International Garlic Symposium

**Role of Garlic in Cardiovascular
Disease Prevention, Metabolic
Syndrome and Immunology**

*March 4th - 6th 2014
St. Regis Monarch Beach Resort
Dana Point, California, U.S.A.*



Program and Abstracts

2014 International Garlic Symposium Program

Wednesday, March 5, 2014

SESSION 1: Overview of Garlic and Health

Chair, Khalid Rahman (Liverpool John Moores University, UK)

- The History of Garlic's Medicinal Use
Mark Blumenthal (American Botanical Council, USA)
- Garlic for Blood Pressure, Cholesterol and Immunity: An Overview
Karin Ried (National Institute of Integrative Medicine, Australia)

SESSION 2: Isolation and Functions of Bioactive Constituents in Garlic

Chair, Junji Terao (Tokushima University, Japan)

- Food Functions of Garlic-derived Sulfur Compounds
Toyohiko Ariga (Nihon University, Japan)
- Discovery of Garlic's Molecules Targeting Chemosensory Recognition and Oxidative Stress
Thomas Hofmann (Technical University of Munich, Germany)
- Biosynthesis and Profiling of Specialized Sulfur-containing Metabolites in Garlic
Kazuki Saito (Chiba University, Japan)

SESSION 3: Luncheon Lecture

Chair, Carmia Borek, PhD (Tufts University, USA)

- Garlic and Stress
Daniel J. Crisafi (pH Santé Beauté, Canada)

SESSION 4: Cardiovascular Basic Studies

Chair, Karin Ried (National Institute of Integrative Medicine, Australia)

- **Cardioprotective Actions of Garlic-derived Polysulfides**
David J. Lefer (Louisiana State University Health Sciences Center, USA)
- **Aged Garlic Extract and Inhibition of Platelet Aggregation, The Inside Story!**
Khalid Rahman (Liverpool John Moores University, UK)
- **Aged Garlic Extract Inhibits Key Pathophysiological Processes in the Development of Atherosclerosis**
Norbert Weiss (Technical University of Dresden, Germany)

SESSION 5: Cardiovascular Clinical Studies

Chair, Takami Oka (Wakunaga Pharmaceutical Co., Ltd., Japan)

- **Aged Garlic Extract at Heart Trial: Our Past and Present Clinical Studies**
Karin Ried (National Institute of Integrative Medicine, Australia)
- **Preventive Effects of Garlic against Cardiovascular Disease**
Matthew Budoff (Harbor-UCLA Medical Center, USA)

SESSION 6: Poster Presentation

Chair, Norbert Weiss (Technical University of Dresden, Germany)

- **Structure Elucidation of Antioxidative Lignans in Aged Garlic Extract**
Timo D. Stark (Technische Universität München, Germany)
- **Establishment and Application of Post-Column HPLC Method in Analysis for Sulfur-containing Compounds in Garlic and Its Preparations**
Yukihiro Kodera (Wakunaga Pharmaceutical Co., Ltd., Japan)

- Metabolism and Pharmacokinetic Profile of *S*-Allyl-*L*-cysteine
Hirotaka Amano (Wakunaga Pharmaceutical Co., Ltd., Japan)
- Garlic-derived Polysulfides Reduce the Extent of Myocardial Injury Following Acute Myocardial Infarction
David J. Lefer (Louisiana State University Health Sciences Center, Louisiana, USA)
- Doxorubicin-induced Cardiotoxicity: Protection by Aged Garlic Extract
Nessar Ahmed (Manchester Metropolitan University, UK)
- Aged Garlic Extract Inhibits ADP Induced Platelet Aggregation by More Than One Mechanism
Gordon M. Lowe (Liverpool John Moores University, UK)
- Diallyl Trisulfide, A Flavor Component of Garlic, Inhibits the Platelet Aggregation through the Suppression of Akt Phosphorylation
Takashi Hosono (Nihon University, Japan)
- Aged Garlic Extract Suppresses the Development of Atherosclerosis in Apolipoprotein E-Knockout Mice
Naoaki Morihara (Wakunaga Pharmaceutical Co., Ltd., Japan)
- Effect of Chronic Administration of *S*-Allylcysteine (SAC) on Nrf2 and Antioxidant Enzymes Levels in Striatum, Cerebral Cortex and Hippocampus
Úrzula Franco-Enzástiga (National Institute of Neurology and Neurosurgery, Mexico)
- Subchronic Administration of *S*-Allylcysteine (SAC), Does Not Cause Histological Damage nor Alters Renal and Hepatic Function, but Activates Nrf2 Factor in Cerebral Cortex in Male Rats
Ricardo Santana-Martínez (National Institute of Neurology and Neurosurgery, Mexico)
- Effect of *S*-Allylcysteine, a Major Organosulfur Compound of Aged Garlic Extract, on the Resistance to Oxidative-/Heat-Stress and Longevity of *C. elegans*
Takahiro Ogawa (Wakunaga Pharmaceutical Co., Ltd., Japan)

- Aged Garlic Extract Enhances Neurite Outgrowth in NGF-treated PC12 Cells and Reduces Cell Death Induced by 6-Hydroxydopamine in SH-SY5Y Cells through Inhibition of Reactive Oxygen Species Cytotoxicity
Kohfuku Kohda (KOH Research Institute of Medicinal Chemistry, Japan)
- Anti-Obesity Effect of Garlic Oil
Taiichiro Seki (Nihon University, Japan)
- Effects of Diallyl Trisulfide Derived from Garlic on Cell Growth and Apoptosis in HGC-27 Human Gastric Cancer Cells
Tomomi Hosono-Fukao (Ochanomizu University, Japan)
- The Effects of Aged Garlic Extract on Coronary Artery Calcification Progression: Results of 4 Randomized Trials
Mathew Budoff (Harbor-UCLA Medical Center, USA)

Thursday, March 6, 2014

SESSION 7: Immune Regulation & Metabolic Syndrome (I)

Susan S. Percival (University of Florida, USA)

- The Role of Adiponectin in Cardiometabolic Diseases
Patricio Lopez-Jaramillo (FOSCAL, University of Santander, Colombia)
- The Effects of Aged Garlic Extract on the Regression of Coronary Plaque in Patients with Metabolic Syndrome on Coronary Computed Tomographic Angiography: Prospective Randomized Study.
Matthew Budoff (Harbor-UCLA Medical Center, USA)
- Inhibition of Glycation by Aged Garlic Extract: Relevance to Diabetic Complications
Nessar Ahmed (Manchester Metropolitan University, UK)
- Aged Garlic Extract Ameliorates Abnormal Fatty Acid Metabolism in Insulin Resistant Model
Toshio Maeda (University of Shizuoka, Japan)

SESSION 8: Immune Regulation & Metabolic Syndrome (II)

Chair, Patricio Lopez-Jaramillo (FOSCAL, University of Santander, Colombia)

- Inflammation and Immunity: A Role for Garlic Products
Susan S. Percival (University of Florida, USA)
- Bioavailability and Potential Biological Activities of Caffedymine Analogues Found in Garlic
Jae B. Park (United States Department of Agriculture, USA)
- Garlic Influences Gene Expression *In Vivo* and *In Vitro*
Craig S. Charron (United States Department of Agriculture, USA)