

Designer Foods III

Phytochemicals in Garlic, Soy, and Licorice Research Update and Implications

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Chairman: Dr. Paul A. Lachance (Rutgers – The State University, NJ, USA)

Theme: Phytochemicals in Garlic, Soy, and Licorice -Research Update and Implications-

Section I: Perspectives

- PLANT FOODS IN DISEASE PREVENTION – STUDY OF PROCEDURE LESSONS FROM EASTERN VERSUS WESTERN DIET
Devra L. Davis (U.S. Department of Health and Human Services, Public Health Service, Washington, DC, USA)
- SAPONINS IN *ALLIUM* VEGETABLES
C. Lewandowski and C. Beecher (University of Illinois at Chicago, IL, USA)

Section II: The Chemical and Biological Principles of Designer Foods

- OVERVIEW OF ANALYTICAL TECHNIQUES FOR THE FINGERPRINTING OF PHYTOCHEMICALS IN DESIGNER FOODS
Robert T. Rosen and Thomas G. Hartman (Rutgers University, NJ, USA)
- CHEMICAL EFFECTS OF PROCESSING AND FOOD PREPARATION ON CAROTENOIDS AND SOY AND GARLIC PHYTOCHEMICALS
Jin-R. Zhou (Beth Israel Deaconess Medical Center, MA, USA) and John W. Erdman, Jr. (University of Illinois, IL, USA)
- PHYTOCHEMICALS: BIOCHEMICAL MARKERS OF INGESTION, ABSORPTION AND METABOLISM USING FLAXSEED AS A MODEL
Clare M. Hasler (Agricultural Bioprocess Lab, IL, USA)
- RESEARCH APPROACHES TO SPECIAL PRECLINICAL SAFETY AND TOXICOLOGICAL EVALUATIONS
Shirley A.R. Blakely (Food and Drug Administration, Washington, DC, USA)

Section III: Phytopharmacology of Garlic Food Forms

- PHYTOCHEMISTRY OF GARLIC HORTICULTURAL AND PROCESSING PROCEDURES
Hiromichi Matsuura (Wakunaga Pharmaceutical, Co., Ltd., Hiroshima, Japan)
- INTERNATIONAL PHYTOTHERAPEUTIC USES OF GARLIC FOOD FORMS
Rajabather Krishnaraj (University of Illinois at Chicago, IL, USA)
- LIPID SOLUBLE PHYTOCHEMICAL CONSTITUENTS IN GARLIC FOOD FORMS
David S. Weinberg (Southern Research Institute, AL, USA)
- CHEMICAL METHODS DEVELOPMENT FOR QUANTITATION OF PHYTOCHEMICALS IN AQUEOUS GARLIC EXTRACT
Richard S. Geary and Michael A. Miller (Southwest Research Institute, TX, USA)
- DIETARY TOLERANCE/ABSORPTION/METABOLISM OF PHYTOCHEMICALS IN GARLIC
Yukihiro Kodera (Wakunaga Pharmaceutical, Co., Ltd., Hiroshima, Japan)
- ANTIOXIDANT ACTIVITIES OF AGED GARLIC EXTRACTS AND CANCER CHEMOTHERAPY
S. Tsuyoshi Ohnishi and Ryusuke Kojinra (Philadelphia Biomedical Research Institute, PA, USA)
- IMPROVEMENT OF AGE-RELATED DETERIORATION OF LEARNING BEHAVIORS AND IMMUNE RESPONSES BY AGED GARLIC EXTRACT
Yongxiang Zhang, Toru Moriguchi, Hiroshi Saito and Nobuyoshi Nishiyama (The University of Tokyo, Tokyo, Japan)
- ANTIOXIDANTS IN GARLIC. II. PROTECTION OF HEART MITOCHONDRIA BY GARLIC EXTRACT AND DIALLYL POLYSULFIDE FROM THE DOXORUBICIN-INDUCED LIPID PEROXIDATION
Shoji Awazu (Tokyo University of Pharmacy and Science, Tokyo, Japan) and Toshiharu Horie (Chiba University, Chiba, Japan)
- ROLE OF GARLIC IN DISEASE PREVENTION – PRECLINICAL MODELS
Shunso Hatono (Wakunaga Pharmaceutical, Co., Ltd., Hiroshima, Japan) and Michael J. Wargovich (M.D. Anderson Cancer Center, TX, USA)

- EFFECTS OF AGED GARLIC EXTRACT ON RAT BRAIN NEURONS
Hiroshi Saito, Toru Moriguchi, Yongxiang Zhang, Hiroshi Katsuki and Nobuyoshi Nishiyama (The University of Tokyo, Tokyo, Japan)
- DIETARY AGED GARLIC EXTRACT INHIBITS SUPPRESSION OF CONTACT HYPERSENSITIVITY BY ULTRAVIOLET B (UVB, 280–320 NM) RADIATION OR *CIS* UROCANIC ACID
Vivienne E. Reeve, Meira Bosnic, Emilia Rozinova and Christa Boehm-Wilcox (University of Sydney, Australia)
- GARLIC AND PREVENTION OF PROSTATE CANCER
John T. Pinto and Richard S. Rivlin (Memorial Sloan-Kettering Cancer Center & New York Hospital–Cornell Medical Center, NY, USA)
- POTENTIAL INTERACTION OF AGED GARLIC EXTRACT WITH THE CENTRAL SEROTONERGIC FUNCTION: BIOCHEMICAL STUDIES
Gilles M. Fillion, Marie-Paule Fillion, Francisco Bolaños-Jimenez, Hala Sarhan and Brigitte Grimaldi (Institut Pasteur, France)
- GARLIC AND SERUM CHOLESTEROL
Dale D. Schmeisser (University of Illinois, IL, USA)
- MODULATION OF ARACHIDONIC ACID METABOLISM BY GARLIC EXTRACTS
Nikolay V. Dimitrov and Maurice R. Bennink (Michigan State University, MI, USA)

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- ISOLATED SOY PROTEIN TECHNOLOGY – POTENTIAL FOR NEW DEVELOPMENTS
Belinda H. Jenks, Doyle H. Waggle and E.C. Henley (Protein Technologies International, Inc., MO, USA)
- ROLE OF SOY FOOD FORMS IN PREVENTION OF HUMAN VASCULAR DISEASE
Takemichi Kanazawa, Tomohiro Osanai, Tsugumichi Uemura, Takaatsu Kamada, Kogo Onodera (Hirosaki University School of Medicine, Aomori, Japan) and Hirobumi Metoki, Yasaburo Oike (Reimeikyo Rehabilitation Hospital, Aomori, Japan)
- COMMERCIAL PHYTOCHEMICALS FROM SOY
James P. Clark (Henkel Corporation, IL, USA)

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Peter S. Vora and Lucia C.A. Testa (MacAndrews and Forbes Co., NJ, USA)
- **PHYTOCHEMICAL CONSTITUENTS IN LICORICE**
James Duke (U.S. Department of Agriculture, Agricultural Research Service, MD, USA)
- **LICORICE: ABSORPTION, DISTRIBUTION, METABOLISM AND CANCER CHEMOPREVENTION**
Rajendra G. Mehta¹, Vernon Steele², Herbert Pierson³, Andreas Constantinou¹ and Richard C. Moon¹ (¹University of Illinois, IL, USA, ²The National Cancer Institute, MD, USA, ³Preventive Nutrition Consultants, Inc., WA, USA)
- **CANCER PREVENTION BY LICORICE**
Hoyoku Nishino (National Cancer Center Research Institute, Tokyo, Japan)
- **CLINICAL EVALUATION AND SAFETY OF LICORICE-CONTAINING FORMULATIONS**
Herbert F. Pierson (Preventive Nutrition Consultants Inc., WA, USA)

Section VI: Bridging the Gaps in Knowledge for Designer Food Applications

- **STUDIES OF PLANT FOODS FOR DISEASE PROTECTION**
Brian D. Siebert (CSIRO Division of Human Nutrition, Australia)
- **ONGOING AND FUTURE CLINICAL NUTRITION RESEARCH NEEDS**
Daniel W. Nixon (Medical University of South Carolina, SC, USA)
- **ROLE OF PHYTOCHEMICALS IN CHRONIC DISEASE PREVENTION**
Gerda Guhr and Paul A. Lachance (Rutgers – The State University, NJ, USA)