

THE 8th INTERNATIONAL CONFERENCE OF FOOD SCIENCE AND TECHNOLOGY

Food Innovation and Safety in the Global Market

(program and abstract book)

Organizers:

University of California, Davis
Jiangnan University

Chairs:

Chancellor Larry Vanderhoef, University of California, Davis, USA
President Jian Chen, Jiangnan University, CHINA

Host:

University of California, Davis, USA

**Davis, CA, USA
August 5-6, 2009**



ICFST'2009

8th International Conference of Food Science and Technology

University of California, Davis

August 5th, Freeborn Hall

8:30 Registration, Coffee and Posters

9:50 Plenary Session 1

12:00 *Lunch & poster session*

1:15 Plenary Session 2

3:15 *Break & poster session*

3:45 Plenary Talks: Session 3

6:30 Reception – Freeborn Hall

7:15 Dinner - Freeborn Hall

Followed by a musical salute to Food Science by Carl Winter.

August 6th, Wellman Hall

8:00 Noon, Technical Sessions 1, 3 and 5

10:00 *Break, Wellman Patio*

1:30 – 5:00 Technical Sessions 2 and 4

3:00 *Break, Wellman Patio*

The ICFST gratefully acknowledges the sponsorship of the reception and dinner by The Almond Board of California, and donations of wine and peanuts by E. & J. Gallo and the National Peanut Board, respectively

August 5th, Freeborn Hall

8:30 Registration, Coffee and Posters

Plenary Talks: Session One, Chairs Larry Vanderhoef and Jian Chen

- 9:50 Welcome**, Larry Vanderhoef, Chancellor, University of California, Davis, USA and Conference Co-Chair
- 10:00 S-01 Challenges and Opportunities – Food Industry in China**, Jian Chen, President, Jiangnan University, Wuxi, CHINA and Conference Co-chair
- 10:30 S-02 Personalized Diets and Genetic Testing: Is it Time to Rethink Nutritional Genomics?** Raymond Rodriguez, Professor, Section of Molecular and Cellular Biology, and Director, Center of Nutritional Genomics, UC Davis, USA
- 11:00 S-03 Olive Juice: A New Food Ingredient for Applications in Human and Animal Health**, Roberto Crea, Founder and President, CreAgri, Hayward, CA, USA
- 11:30 S-04 World Menus 2010: The Convergence of Food Science, Health & Wellness and the Culinary Arts**, Greg Drescher, Executive Director of Strategic Initiatives, The Culinary Institute of America, Greystone, St. Helena, CA, USA
- 12:00 Lunch & poster session**

Plenary Talks: Session Two, Chairs James Seiber and Hao Zhang

- 1:15 S-05 Emerging Food Allergens in the Global Market**, Suzanne Teuber, Associate Professor, Department, Internal Medicine, Rheumatology and Allergy. Organization, School of Medicine, UC Davis, USA
- 1:45 S-06 From Green to Black: A New Approach to Herbal Medicine Studies**, Pingfan Rao, Professor, Institute of Biotechnology, College of Bioscience and Biotechnology, Fuzhou University, and Vice President, Chinese Institute of Food Science and Technology, Beijing, CHINA
- 2:15 S-07 New Analytical Tools for Glycoconjugates - Discovery of a New Class of Bioactive Foods**, Carlito Lebrilla, Professor and Chair, Department of Chemistry, UC Davis, USA
- 2:45 S-08 The Foundation of California Almond Global Growth Strategy**, Richard Waycott, President and CEO, Almond Board of California, Modesto, CA, USA
- 3:15 Break & poster session**

The 8th ICFST, August 5 to 6, 2009, UC Davis

Plenary Talks: Session Three, Chairs, Tara McHugh and Jian-Rong Li

- 3:45 **S-09 Gastric Digestion of Foods—Challenges and Opportunities for Food Engineers**,
R. Paul Singh, Professor, Department of Biological and Agricultural Engineering, UC
Davis, USA
- 4:15 **S-10 Using Sensory Information to Make Product Decisions**, Herbert Stone, Senior
Advisor & Co-Founder, Tragon, Redwood Shores, CA, USA
- 4:45 **S-11 Innovative Food Processing for Health**, Tara McHugh, Research Leader,
Processed Foods Research, USDA Agricultural Research Service, Western Regional
Research Center,
Albany, CA, USA
- 6:30 **Reception – Freeborn Hall**
- 7:15 **Dinner - Freeborn Hall**
Followed by a musical salute to Food Science by Carl Winter.

The ICFST gratefully acknowledges the wine donation by E. & J. Gallo,
And the sponsorship of the reception and dinner by The Almond Board of California



August 6th, Wellman Hall, Technical Talks, 5 Sessions

Almond Functionality – Session 1

- 8:30 T1-01 **The Effect of Almond on Intestinal Bacterial Flora and Some Enzymes in Rats**, Li Ni, Wang Wei, Liu Zhibin, Guangwei Huang, Pingfan Rao, Institute of Food Science and Technology, Fuzhou University, Fuzhou, CHINA
- 9:00 T1-02 **Effect of Pasteurization Treatments on Enzyme Activities in Almonds**, Gordon Anthon and Diane Barrett, Department of Food Science and Technology, University of California, Davis, USA
- 9:30 T1-03 **Emulsion Formation During Aqueous Enzymatic Extraction of Almond Oil and Its Destabilization: Properties and Effect of Sweet Almond Protein**, Wenbin Zhang, Xiaona Sheng, Shiyong Xu, Zhang Wang, Ruijin Yang, Xiao Hua, State Key Laboratory of Food Science and Technology, Jiangnan University, Wuxi, CHINA
- 10:00 **Break**
- 10:30 T1-04 **Mitigating Acrylamide Formation in California Roasted Almonds**, Gong Zhong, Guangwei Huang, Alyson Mitchell, Department of Food Science & Technology, University of California, Davis, CA, USA
- 11:00 T1-05 **Efficacy of Infrared Heating for Almond Pasteurization**, Zhongli Pan, Gokhan Bingol, USDA Agricultural Research Service, Western Regional Research Center Albany, CA, USA
- 11:30 T1-06 **Impact of Pasteurization Processes on Almond Sensory Attributes and Shelf Stability**, Guangwei Huang, Karen Lapsley, Timothy H. Sanders, Keith W. Hendrix, Lisa L. Dean, Gail Vance Civile, Joanne Seltsam, Almond Board of California (ABC), Modesto, CA, USA

A World View of Nut Safety – Session 2

Co-Organizers/Chairs:

Sharon Shoemaker, Executive Director, CIFAR, UC Davis and
Sam Cunningham, President, Cunningham Business Consulting Inc., Sacramento, CA, USA

- 1:30 T2-01 **Global Perspective on Nut Safety**, Sam Cunningham, Cunningham Business Consulting, Sacramento, CA, USA
- 1:45 T2-02 **Salmonella in Peanut and Nut Products: A Manageable Risk**, Michael Kashtock, Consumer Safety Officer and Senior Policy Advisor, Division of Plant and Dairy Food Safety, Center for Food Safety and Applied Nutrition, FDA, College Park, MD, USA
- 2:10 T2-03 **Almond Board of California Mandatory Program for the Reduction of Salmonella Bacteria on Almonds**, Tim Birmingham, Associate Director, Quality Assurance and Industry Service Almond Board of California, Modesto, CA, USA

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- 2:35 T2-04 **Salmonella in Almonds: Exploring the Causes of an Outbreak and Evaluating Prevention Strategies**, Linda J. Harris, Department of Food Science and Technology, University of California, One Shields Ave., Davis, CA, USA
- 3:00 **Break**
- 3:15 T2-05 **Rebuilding Trust – Regaining Consumption**, R. Marie Fenn, President and General Manager, National Peanut Board, Atlanta, GA, USA
- 3:40 T2-06 **Food Safety Considerations in California Pistachios**, Bob Klein, Manager, Administrative Committee for Pistachios, Modesto, CA USA
- 4:05 T2-07 **Perspective from China on Ensuring Safety in Nuts**, Pingfan Rao, Professor, Institute of Biotechnology, College of Bioscience and Biotechnology, Fuzhou University, and Vice President, Chinese Institute of Food Science and Technology, Beijing, CHINA
- 4:30 **Panel Discussion.**
- 4:55 **Closing remarks.** Sharon Shoemaker and Sam Cunningham

Dairy and Food Chemistry- Session 3

- 8:00 T3-01 **Overview on Dairy Ingredients**, Phillip Tong, Department of Dairy Science, California Polytechnic State University, San Luis Obispo, CA, USA
- 8:30 T3-02 **Relationship between the Structure and Slow Digestion Property of Waxy Maize Starch during *in vitro* Amylase Degradation**, Ming Miao, Bo Jiang, Tao Zhang, State Key Laboratory of Food Science & Technology, Jiangnan University, Wuxi, CHINA
- 9:00 T3-03 **Nutrient delivery systems: Challenges and Opportunities**, Moshe Rosenberg, Department of Food Science & Technology, University of California, Davis, CA, USA
- 9:30 T3-04 **Oxidation of Unsaturated Monoacyl Trehalose in Aqueous Solution**, Yue Sun, Jie Chen, Wenshui Xia, Zhiyong He, State Key Laboratory of Food Science & Technology, Jiangnan University, Wuxi, CHINA
- 10:00 **Break**
- 10:30 T3-05 **Whey Protein Films and Coatings: Opportunities and Challenges**, John Krochta, Department of Food Science & Technology, University of California, Davis, CA, USA
- 11:00 T3-06 **Identification of Aflatoxin B₁ (AFB₁) Photodegradation Products using Ultra-performance Liquid Chromatography/quadrupole Time-of-Flight Mass Spectrometry (UPLC/Q-TOF-MS)**, Ruijie Liu, Qingzhe Jin, Guanjin Tao, Liang Shan, Xingguo Wang, School of Food Science and Technology, Jiangnan University, Wuxi, CHINA

- 11:30 T3-07 **Milk Fat Globule Membrane**, Rafael Jimenez, Department of Dairy Science, California Polytechnic State University, San Luis Obispo, CA, USA

Food Science and Engineering – Session 4

- 1:30 T4-01 **Aquatic Products Processing Industry in China: Challenges and Outlook. Trends in Food Science & Technology**, Jian-rong Li, Zhejiang Gongshang University, Hangzhou, CHINA
- 2:00 T4-02 **Nondestructive Quality Evaluation of Fresh and Processed Foods using Magnetic Resonance Imaging**, Michael McCarthy, Department of Food Science & Technology, University of California, Davis, CA, USA
- 2:30 T4-03 **Interaction between Amylose and β -Cyclodextrin Investigated by Complexing with Conjugated Linoleic Acid**, Ying Yang, Zhengbiao Gu, Genyi Zhang, Fengwei Li, School of Food Science and Technology, Jiangnan University, Wuxi, CHINA
- 3:00 **Break**
- 3:30 T4-04 **Screening the Optimum Conditions for Delaying the Stiffening of Pork Sol**, Wen Zhang, Li Ni, Jingke Guo, Zhiyun Liu, Pingfan Rao, Institute of Food Science and Technology, Fuzhou University, Fuzhou, CHINA
- 4:00 T4-05 **Concentration and time effects of hydroxyl radical oxidizing systems on biochemical properties of whey protein isolate**, Baohua Kong, College of Food Science, Northeast Agricultural University, Harbin, Heilongjiang, China; Xuhai Cui, Department of Life Science, Zaozhuang University, Shandong, China; Youling L. Xiong, SKLF, Jiangnan University, Wuxi, Jiangsu, China; Dongmei Zheng, College of Food Science, Northeast Agricultural University, Harbin, Heilongjiang, China
- 4:30 T4-06 **Value-Added, Lentil-Based Expanded Extruded Snacks Fortified with Gluten-Free Fiber Ingredients**, Jose De J. Berrios, J. Pan, and M. Tom, USDA Agriculture Research Service, Western Regional Research Center, Albany, CA USA

Food Safety and Nutrition Session 5

- 8:00 T5-01 **Food Safety and *Listeria monocytogenes* Biofilms**, Glenn Young, Department of Food Science & Technology, University of California, Davis, CA, USA
- 8:30 T5-02 **Heptapeptide LH, Derived From Animal Blood, Induces Apoptosis in Human Myeloid Leukemia Cells**, Hao Li, Meijuan Huang, Pingfan Rao, Institute of Biotechnology, College of Bioscience and Biotechnology, Fuzhou University, Fuzhou, CHINA
- 9:00 T5-03 **Transcriptome analysis of *Escherichia coli* O157:H7 Exposed to Romaine Lettuce Lysates**, Jennifer L. Kyle, Danielle Goudeau, Craig T. Parker, Maria T. Brandl, USDA Agricultural Research Service, Western Regional Research Center, Albany, CA, USA

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9:30 T5-04 **The Microbiological and Biochemical Changes of Collichthys Fish-balls by Addition with Tea Polyphenols at Refrigerant Condition**, Ling-lin Fu, Jian-rong Li, Ping Yu, Key Laboratory of Food Safety of Zhejiang Province School of Food Science and Biotechnology, Zhejiang Gongshang University, Hangzhou, CHINA

10:00 **Break**

10:30 T5-05 **Botulinum Neurotoxin Research at the Western Regional Research Center**, Luisa W. Cheng, Larry H. Stanker, USDA Agricultural Research Service, Western Regional Research Center, Albany, CA, USA

11:00 T5-06 **Modication of the Gene Encoding Glutamate Dehydrogenase from *Bacillus subtilis natto***, Jiale Wang, Lili Chen, Jianhua Zhang, Food Science & Technology, Jiao Tong University, Shanghai, CHINA

11:30 T5-07 **Diet induced obesity related metabolic disease in hamsters fed high fat diets**, Wallace Yokoyama, Maggie Chiu, Glenn Bartley, Liomeng Lee, Hyunsook Kim, Yun-Jeong Hong, USDA Agricultural Research Service, Western Regional Research Center, Albany, CA, USA