AGFD

DIVISION OF AGRICULTURAL AND FOOD CHEMISTRY

A. Mitchell, Program Chair

SUNDAY MORNING

Section A

Boston Convention & Exhibition Center
Room 160A

Undergraduate Research Symposium

C. J. Brine, Presiding
C. Brine, Organizer

8:35 1. Chemical and mathematical approaches to promote the development of functional foods rich in natural antioxidants. J. Hao

9:05 2. Investigating the effect of common antioxidants on the generation and fate of pyrazinium radicals in the Maillard reaction. Q. Bin, D. G. Peterson, R. J. Elias


10:20 4. Starch retrogradation in gluten-free sorghum bread. E. Buckley

10:50 5. Accumulation and toxicity of engineered nanoparticles to agricultural crops. J. Hawthorne


Section B

Boston Convention & Exhibition Center
Room 161

Agricultural and Food Derived Natural Products for Preventing and Combating Disease

Purification and Characterization of Natural Compounds

F. Pellati, G. Gowda, Presiding
B. Patil, G. Jayaprakasha, K. Chidambara Murthy, N. P. Seeram, Organizers

8:35 7. Comprehensive study of Digitalis Purpurea by selective ionization of cardiac glycosides using ESI-LC-QTrap. F. Shadkami, M. D. Celiz, A. D. Jones

9:00 8. Rapid method for the separation of polymethoxyflavones using flash chromatography. R. M. Uckoo, G. K. Jayaprakasha, B. S. Patil
Release of bound procyanidins from cranberry pomace by alkaline hydrolysis. B. L. White, L. R. Howard, R. L. Prior


Metabolic profiling using isotope enhanced NMR spectroscopy methods for disease diagnostics. G. Gowda, D. Raftery


Section C

Boston Convention & Exhibition Center

**General Papers**

A. Loaiza, N. Da Costa, *Presiding*
A. Mitchell, *Organizer*

Cranberry flavonol glycoside bioavailability in humans with type-2 diabetes. N. Vorsa, A. P. Singh, T. Wilson, V. Vorsa

Selective separation of polyphenols using magnetic beads coated with hydrogen bonding ligands. T. Dong, Q. Zhou, X. Xiong, S. Chen


Resveratrol as a $k_{cat}$ type inhibitor of tyrosinase enzyme: Potentials as a melanogenesis inhibitor. H. Satooka, I. Kubo

Content of nutritional substances in commercial tea beverages. S. Li, C. Lo, N. E. Rawson, P. Lucas-Schnarre, C. Ho

Acrylamide in cereal products: Precursors, formation, and control measures. A. Mustafa

Surface plasmon resonance (SPR) detection of staphylococcal enterotoxin A in food samples. M. B. Medina

**Nutritional Chemistry Symposium**

*Sponsored by SOCED, Cosponsored by AGFD*

**SUNDAY AFTERNOON**
Agricultural and Food Derived Natural Products for Preventing and Combating Disease

In Vitro Model

N. P. Seeram, Organizer, Presiding  
B. Neelwarne, Presiding  
B. Patil, G. Jayaprakasha, K. Chidambara Murthy, Organizers


1:55 22. Compositional characteristics of fruits of hawthorn (Crataegus sp.) and emblic leafflower (Phyllanthus emblica). B. Yang, H. Kallio, P. Liu, M. Kortesniemi


3:00 24. Sugar maple (Acer saccharum) phytochemicals: Antioxidant, antibacterial, and cancer cell cytotoxicity properties. L. Li, N. P. Seeram


Section A

Young Scientist Award Symposium

C. J. Brine, Presiding  
C. Brine, Organizer

1:35 27. Bioactive secondary metabolites from agro-food industrial byproducts as source of dietary supplements. G. Jayaprakasha, B. S. Patil

2:05 28. Bioavailability and delivery of nutraceuticals using nanotechnology. Q. Huang

2:35 29. Rhizospheric signaling: From positive feedback to innate plant defense. H. Bais


3:50 31. Electrospun nanofibrous membranes: Novel materials for food technology applications. A. Arecchi

Boston Convention & Exhibition Center

General Papers

A. Mitchell, Organizer, Presiding
N. Da Costa, K. Mahattanatawee, Presiding

1:35 33. Enrichment of the antioxidant activity in potato tuber by ultrasound and electric treatments. K. Hironaka, T. Funato, H. Koaze

1:55 34. Enhanced infusion of natural antioxidants into fruits using high hydrostatic pressure processing. S. Mahadevan, M. V. Karwe

2:15 35. Pressurized hot ethanol extraction of carotenoids from carrot waste. A. Mustafa, C. Turner

2:35 36. New paradigm for microwave extraction of essential oils and natural compounds. D. Gunn

2:50 37. Food for thoughts: The potential for food patenting. K. B. Drake


3:30 39. GC-MS and sensory strawberry flavor changes at five maturity stages. X. Du, A. Plotto, E. Baldwin, R. Rouseff

Careers in Chemistry

What it's Like in the Real World and How Do I Get the Job?

Sponsored by SOCED, Cosponsored by AGFD

MONDAY MORNING

Boston Convention & Exhibition Center
Room 160A

Symposium Honoring Prof. Terry E. Acree on the Occasion of his 70th Year

B. Halpern, C. J. Brine, Presiding
C. Brine, Organizer

8:05 40. Flavor chemistry and the perception of flavor. T. E. Acree
8:45 41. Internet as a research tool for flavor chemistry: FlavorNet and beyond. **D. D. Roberts**

9:15 42. Retronasal smelling: The roles of nasal cavity and oral cavity sensory systems. **B. P. Halpern**

10:00 43. Unexpurgated CHARM of Terry Acree. **J. V. Leland**

10:30 44. Phragrance and pharmacology. **S. Firestein**

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Section C

Boston Convention & Exhibition Center
Room 160C

**General Papers**

A. Rimando, K. Cadwallader, V. Acquarone, *Presiding*
A. Mitchell, *Organizer*

8:05 45. Rapid screening method for the determination of rodenticide content of commercial bait formulations. **D. A. Goldade**, D. L. Griffin, D. T. Keller

8:25 46. Multi-residue pesticide analysis of botanical dietary supplements by GC-MS/MS and LC-MS/MS. **F. Shi**, J. W. Wong, K. Zhang, D. G. Hayward, T. H. Begley

8:45 47. Determination of diphacinone in kestrel and rat brain tissue. **S. F. Volker**, K. E. Horak, B. A. Rattner, D. A. Goldade


10:00 50. Native and synthetic autoinducers regulate the virulence of the plant pathogens *Pectobacterium carotovora* and *Pseudomonas syringae* in host plants. **A. G. Palmer**, E. Streng, H. E. Blackwell

10:20 51. Poly(lactic acid) and Osage orange wood fiber composites for agricultural mulch films. **V. Finkenstadt**, B. Tisserat

10:40 52. Uptake of organochlorine pesticides by agricultural crops: Mechanistic studies. **W. A. Berger**, M. I. Mattina
G. Jayaprakasha, Organizer, Presiding
H. Xiao, H. Humpf, Presiding
B. Patil, K. Chidambara Murthy, N. P. Seeram, Organizers

8:35 53. Hydroxylated polymethoxyflavones from orange peel as novel cancer preventive agents. H. Xiao, P. Qiu, P. Dong, C. Ho, S. Li

9:00 54. Anthocyanin-containing fruits and vegetables are functional foods with potential to ameliorate debilitating diseases. M. G. Nair


10:30 57. Pig cecum model: A powerful system to mimic the human intestinal metabolism of flavonoids. G. van’t Slot, K. Rose, A. Engemann, H. Humpf

10:55 58. Bioactive constituents from Formosan Kadsura and Schisandra. Y. Shen

11:20 59. Chemical properties and antioxidant capacity of Chinese bay berry juice. X. Ye

MONDAY AFTERNOON

Section B

Agricultural and Food Derived Natural Products for Preventing and Combating Disease

In Vitro Model

D. Klimis-Zacas, S. Poulose, Presiding
B. Patil, G. Jayaprakasha, K. Chidambara Murthy, N. P. Seeram, Organizers


1:30 61. Composition of fruit and vegetative cranberry phenolics with relation to antioxidant capacity. N. Vorsa, A. P. Singh, T. Wilson, M. R. Freeman, V. Vorsa


2:20 63. Chemical constituents and biological activity of Taiwanese sugar cane extract. Y. Wu

3:00 64. Inhibition of intestinal alpha-glucosidases and anti-postprandial hyperglycemic effect of grape seed extract. K. Zhou


Section A

Boston Convention & Exhibition Center
Room 160A

Symposium Honoring Prof. Terry E. Acree on the Occasion of his 70th Year

Award Symposium

A. Taylor, D. Roberts, Presiding
C. Brine, Organizer

1:35 67. Flavor of foods: The sound of an orchestra rather than that of a single instrument. P. H. Schieberle

2:05 68. What do we taste, when we taste? T. Hofmann

2:35 69. Aroma release, qualia and perceived flavour. A. J. Taylor

3:20 70. Identification of new strawberry sulfur volatiles and changes during maturation. X. Du, M. Song, R. L. Rouseff

3:50 71. Gas chromatography olfactometry applications to dairy products: A wonderful friendship. S. Carpino

4:20 72. Integrating the culinary arts and sciences in Terry Acree's flavor world. C. Loss

Section C

Boston Convention & Exhibition Center
Room 160C

Cardiovascular Disease and Diabetes

J. Finley, Organizer, Presiding

1:35 73. Does lycopene have a role in the prevention of cardiovascular disease? H. D. Sesso

2:05 74. Dietary fat and cardiovascular disease: Quantity or quality? A. Lichtenstien

2:35 75. Polyunsaturated fatty acids and the endocannabinoid signalling system. B. A. Watkins

3:10 76. Milk proteins in the regulation of food intake and metabolic syndrome. H. Anderson, B. Luhovyy, T. Akhavan, S. Panahi

3:40 77. Cardiovascular health benefits of soy foods. J. W. Anderson

Section D

Boston Convention & Exhibition Center
Chemistry and Nutrition for Better Health

Plenary Lecture

J. Finley, Organizer, Presiding

4:00 78. Impact of early life nutrition on health and wellness. S. Roberts

4:30 79. Optimum diets and natural products for disease prevention. B. N. Ames

Undergraduate Research Posters

Agricultural and Food Chemistry

Sponsored by CHED, Cosponsored by AGFD and SOCED

MONDAY EVENING

Boston Convention & Exhibition Center

Sci-Mix

N. Da Costa, Organizer

8:00 - 10:00

6. See previous listings.

114, 118, 125, 126, 128, 131, 137, 138, 140, 141, 142, 145, 151, 154, 155, 157, 160. See subsequent listings.

TUESDAY MORNING

Section A

Boston Convention & Exhibition Center
Room 160A

Symposium Honoring Prof. Terry E. Acree on the Occasion of his 70th Year

Award Symposium

K. Cadwallader, R. Mcgorrin, Presiding
C. Brine, Organizer

8:05 80. Flavor chemistry of lemon-lime flavored carbonated beverages. B. Hausch, K. Cadwallader

8:35 81. Perspectives on flavor analysis linked to chemosensory impact. R. J. McGorrin
9:05 82. Zen and the art of chemosensory perception. J. F. Delwiche


10:20 84. Progression of the retronasal aroma simulator and flavor release sampling. K. D. Deibler

10:50 85. Commercial consequences of Shallenberger and Acree's AH,B theory of sweet taste. M. G. Lindley

Section C

Boston Convention & Exhibition Center
Room 160C

Nutrition and Brain Aging

J. Finley, Organizer, Presiding

8:05 86. Behavioral and signaling effects of blueberries, strawberries, and walnuts: Quenching the fires of aging. J. Joseph, B. Shukitt-Hale, D. Fisher

8:35 87. Application of calorie restriction and calorie restriction mimetics to attenuate brain aging. D. Ingram

9:20 88. Role of an antioxidant diet and behavioral enrichment on cognition and neuropathology in the canine model of aging. E. Head


Section B

Boston Convention & Exhibition Center
Room 161

Agricultural and Food Derived Natural Products for Preventing and Combating Disease

In Vitro Model

B. Dayal, C. Erlanson-Albertsson, Presiding
B. Patil, G. Jayaprakasha, K. Chidambara Murthy, N. P. Seeram, Organizers

8:35 90. Methyl jasmonate: A plant stress hormone as an anticancer agent. E. Flescher

9:00 91. Methyl nomilinate inhibits SW480 colon cancer cells growth through modulation of cell cycle regulators. J. Kim, G. Jayaprakasha, A. Vikram, B. S. Patil


10:05 93. Characterization of bioactive compounds of selected (sub)tropical fruits and leaves grown in Jeju and their antiproliferative effects on human cancer cells through apoptosis. S. K. Cho
10:30 94. Influence of the target molecule on the ORAC index. C. López-Alarcón


TUESDAY AFTERNOON

Section B

Boston Convention & Exhibition Center
Room 161

Agricultural and Food Derived Natural Products for Preventing and Combating Disease

In Vivo Model

K. Shetty, Y. Park, Presiding
B. Patil, G. Jayaprakasha, K. Chidambara Murthy, N. P. Seeram, Organizers


1:30 97. Bioactives from a traditional herb collected from the tropical rainforest. C. Choo

1:55 98. (-)-Epigallocatechin-3-gallate protects neonatal rat cardiomyocytes against oxidative stress induced by anoxia/reoxygenation injury. W. Li, S. Nie, M. Xie, S. Zhang, K. Zhu

2:20 99. Conjugated fatty acids as a prevention tool for obesity and osteoporosis. Y. Park, Y. Park

3:00 100. Phenolic antioxidant-enriched plant foods for prevention and management of type 2 diabetes and its complications. K. Shetty

3:25 101. Bioactive constituents from Calamus quiquesetinervius and Astragalus membranaceus, and their evaluations in treating metabolic syndrome. Y. Kuo


Section A

Boston Convention & Exhibition Center
Room 160A

Flavor Chemistry of Alcoholic Beverages

M. Qian, Organizer, Presiding
T. Shellhammer, Organizer


2:00 104. Formation of carotenoid-derived aroma compounds in wine. P. Winterhalter, R. Goek

3:10 106. Streamlined analysis of potent odorants in distilled alcoholic beverages. J. Lahne, K. Cadwallader


4:00 108. Analytical investigations to relate important wine odorant 3-mercaptohexan-1-ol to its precursors. D. L. Capone, M. A. Sefton, D. W. Jeffery

Section C

Boston Convention & Exhibition Center
Room 160C

**Cardiovascular Disease and Diabetes**

J. Finley, *Organizer, Presiding*

1:35 109. Is the antioxidant activity of polyphenols relevant for protection against cardiovascular. P. C. Hollman

2:00 110. Fine chemical structures of dietary polyphenols and their importance in understanding their role in the prevention of diseases. A. Scalbert, J. Perez-Jimenez, J. Rothwell, M. Touvier, L. Feuzeu, P. Galan

2:25 111. Cardiovascular health effects of plant polyphenols. K. D. Croft

3:05 112. Food synergy and nutritional research. D. R. Jacobs

3:30 113. Berry intake ameliorates pro-inflammatory factors that increase risk of cardiovascular disease. P. E. Milbury, W. Kalt

Section D

Boston Convention & Exposition Center
Hall C

**General Posters**

N. Da Costa, *Organizer, Presiding*

2:00 - 4:00

114. Direct detection of microbial mRNA by rolling circle amplification. T. Kobori, H. Takahashi, A. Matsumoto, S. Sugiyama


116. Tensile and solubility properties of calcium caseinate films cross-linked with genipin. P. M. Tomasula, P. Qi
117. Effect of estradiol-17\beta on embryos of the giant freshwater prawn, *Macrobrachium rosenbergii* (de Man). N. Pakdeenarong

118. Determination of chitosan in aqueous solutions. S. Zivanovic, R. Davis, J. Li

119. Diterpenoids from the cultured soft coral *Klyxum simplex*. B. Chen, Y. Lu, J. Sheu

120. Synthesis and biological evaluation of novel acylphloroglucinols. C. Chang, C. Tang, J. Liu

121. Antibacterial properties of Baicalin (Radix scutellariae) and Berberine (Rhizama coptidis) for *Staphylococcus aureus*, *Escherichia coli* and *Bacillus atrophaeus*. A. Shah, S. Cai


123. Studies of prenylflavonoids from the plant origin of Okinawan propolis. S. Kumazawa, N. Momose, M. Murase, T. Ohta, S. Fukumoto

124. Preparation of bioactive peptides derived from wheat bran responsible for angiotensin I converting enzyme (ACE I) inhibition and nitric oxide (NO) produced acceleration and effects on hypertension. Y. Sauchi, M. Sakashita, M. Suga, M. Ochiai, T. Kon, K. Yamaguchi, Y. Oghihara

125. Head space solid phase microextraction (HS-SPME) gas chromatography mass spectroscopy (GC/MS) analysis of volatile components of garlic. J. D. Williams, J. G. Clemente

126. Flavor characteristics of Australian Botrytis Semillon. C. E. Hofmann, A. C. Clark, L. M. Schmitdke

127. Enzymatic modification of wheat protein for the formation of pyrazines and other heterocyclic compounds through Maillard reaction. S. Lee, Y. Kim


129. Cytotoxic terpenoids from *Calocedrus macrolepis* var. *formosana*. Y. Kuo

130. Investigation on the flavor enhancing components in glutathione-Maillard reaction products using metabolomic approach. S. Lee, G. Kwon, K. Kim, Y. Kim

131. Effect of hot-water extraction on non-carbohydrate components of hardwoods. M. J. Goundalkar, B. Bujanovic, T. E. Amidon

132. Aroma profile comparisons of "Strawberry Festival" and "Florida Radiance" strawberries by GC-Olfactometry, odor activity values, and sensory evaluation. X. Du, A. Plotto, E. Baldwin, R. Rouseff

133. Effect of short passage time on the polishing and storage temperature of milled and cooked rice quality. Y. Oh, W. Jeong, H. Jeong

134. Metabolite profiling by gas chromatography-mass spectrometry (GC-MS) and principal component analysis (PCA) of *Schizandra chinensis* Baillon (omija fruits) according to their origins. H. Lee, I. Cho, Y. Kim

135. Comparison of the volatile composition of pasteurized and unpasteurized *makgeolli*, a traditional Korean rice wine. H. Park, Y. Kim

137. Insecticidal and antioxidant activities of abietane diterpenoids from *Hyptis verticillata* Jacq. R. B. Porter, D. A. Biggs, L. A. Williams


140. Phytochemical composition and anti-fungal activity of extracts from cranberry cultivars (*Vaccinium macrocarpon* Ait.) that vary in resistance to plant pathogens. M. C. Nunnelley, J. L. Carpenter, C. C. Neto, F. L. Caruso

141. Semi-continuous method for recovering anthocyanins and procyanidins from White Zinfandel (*V. Vinifera*) red grape pomace using subcritical water. J. Monrad, L. R. Howard, K. Srinivas, J. W. King, A. Mauromoustakos


143. Phenolic content, antioxidant activity, and anti-proliferative property of cold-pressed grape seed flours. L. A. Binzer, R. L. Brinsko, J. J. Cha, Z. Chen, S. E. Green, K. E. Grob, J. Hao, C. M. Hitz, L. J. Li, S. N. Swamy, M. Y. Wolf, M. Xu, M. C. Yanik


145. Improved stability of blueberry juice anthocyanins by acidification and refrigeration. L. R. Howard, C. Brownmiller, R. L. Prior

146. *Salvia fruticosa* mediates protection against H$_2$O$_2$-induced DNA damage in HEK293 cells. S. A. Bаниhani

147. Phytochemicals in winged sumac (*Rhus copallinum*) fruit. H. Ma, L. Li, N. P. Seeram


149. Phytochemicals in blueberry (*Vaccinium corymbosum*) stems and roots. A. Cirello, L. Li, L. R. Howard, N. P. Seeram

150. Compounds from *Eugenia jambolana* (Jamun) berries beyond anthocyanins. R. Omar, L. Li, A. Cirello, N. P. Seeram

151. Composition of flavonoids and other phenolics in foliage from cranberry cultivars (*Vaccinium macrocarpon*) that vary in susceptibility to cranberry tipworm and other pests. E. Yiantsidis, C. Dao, A. Averill, S. Tewari, F. Caruso, J. Hicks, K. Colson, K. B. Killday, C. Neto

152. Pterocarpans and flavonoids from *Derris laxiflora* Benth. S. Chien

Purification of homohexameric cruciferin from seeds of mutant Arabidopsis thaliana. T. Sanjeewa, D. D. Hegedus, X. Qiu, T. C. McIntosh, J. P. Wanasundara

Methods of identification of adulterated food products based on carbohydrate profiles by UPLC. C. Hudalla, C. Boissel, P. Iraneta, D. Walsh, K. Wyndham

Analysis of hormones and their conjugates in animal waste using QuEChERS method coupled with liquid chromatography-electrospray-tandem mass spectrometry. J. Kwon, K. L. Armbrust, K. Xia

Photolysis of pesticides on alternate matrices compared to soil. M. C. McGuire, S. B. Hibler, L. R. Marks


Overview of sampling and analytical methodologies in the Food Safety and Inspection Service's National Residue Program. D. Pagan-Rodriguez

Increased air pressure substantially reduces the time required to remove raffinose-series oligosaccharides from legumes. R. Rakijian, J. L. Payne, S. Manzano, M. A. Payne


What can we learn from massive docking? K. T. Nguyen, M. M. Mysinger, B. K. Shoichet, J. J. Irwin

Lanostane triterpenoids and a degraded steroid from Antrodia camphorata. H. Huang, Y. Kuo

New mechanism for the generation of acyl radical in cigarette smoke. N. Hu, S. A. Green

Determination the impact odorants of 'Hutai' icewine from Hu county (China) using headspace solid-phase microextraction. H. Wang, L. Zhang, Y. Liang

Detecting and predicting adulteration in Chinese garlic oil by gas chromatography analysis and chemometrics. D. Bolliet

Blackberries and raspberries: Effects of storage on antioxidant potential. S. B. Gacasan, N. Mwebi

Constituents of maple syrup residue, a waste/by-product of the maple syrup industry. O. Ashorobi, L. Li, D. Worthen, N. Seeram

WEDNESDAY MORNING

Boston Convention & Exhibition Center
Room 160A

Flavor Chemistry of Alcoholic Beverages
M. Qian, Organizer, Presiding
T. Shellhammer, Organizer


8:30 170. Headspace solid-phase dynamic extraction (SPDE) and GC-MS for distinguishing a) styles of South African Chenin Blanc wines and b) types of pot-distilled brandies from regions around the world. V. A. Watts, I. Christ, J. Stadler, Z. Bellingan

8:55 171. A little twist for wine aroma. M. C. Qian

9:40 172. Fermentation and post-fermentation factors affecting accumulation and degradation of odour-active sulfur compounds during wine bottle storage. M. Ugliano, M. Kwiatkowski, P. A. Henshcke, E. J. Waters


Section C

Boston Convention & Exhibition Center
Room 159

Antioxidant Analysis: Challenges and Critical Issues

L. Howard, D. Luthria, Organizers, Presiding
J. Finley, Organizer

8:05 176. Significance of extraction and spectral fingerprinting methodology for the assay of bioactive phytochemicals. D. Luthria, J. Harnly

8:30 177. Stability for extraction and analysis of acylated anthocyanins. H. Matsufuji

8:55 178. Determination of extractable and nonextractable food polyphenols. L. R. Howard, B. L. White

9:20 179. Revising and redirecting the chemistry of antioxidant (antiradical) activity assays. K. M. Schaich

10:00 180. Luminescent molecular and nano probes for quantifying reactive oxygen species and the scavenging activity of dietary antioxidants. D. Huang

10:25 181. Dietary modulation of oxidative stress in humans: Methodology, physiological meaning and value of the non enzymatic antioxidant capacity (NEAC). M. Serafini

10:50 182. Assays for scavenging capacities against hydroxyl and DPPH radicals. L. Yu

11:15 183. Challenges and issues with the ORAC assay. R. L. Prior
11:40 184. Main and modified CUPRAC methods of antioxidant characterization. R. APAK, M. ÖZYÜREK, B. BEKTAŞOĞLU, K. GÜÇLÜ

Section B

Boston Convention & Exhibition Center
Room 161

Agricultural and Food Derived Natural Products for Preventing and Combating Disease

Human Intervention Studies

K. Chidambara Murthy, Organizer, Presiding
C. Neto, J. Novotny, Presiding
B. Patil, G. Jayaprakasha, N. P. Seeram, Organizers

8:35 185. Cranberry phytochemicals: Potential benefits against disease and infection. C. C. Neto

9:00 186. Queen Garnet plum, a new plum variety rich in antioxidant compounds: First results from a pilot study with healthy human subjects. M. Netzel, K. Fanning, G. Netzel, D. Zabaras, D. Russell, R. Stanley

9:25 187. Anthocyanins: Disease preventing pigments with complex bioavailabilities. J. A. Novotny

9:50 188. Food polyphenol consumption may reduce prevalence of hypertension in high cardiovascular risk population. R. M. Lamuela-Raventos, A. Medina-Remón, R. Estruch, C. Andres-Lacueva


WEDNESDAY AFTERNOON

Section A

Boston Convention & Exhibition Center
Room 160A

Flavor Chemistry of Alcoholic Beverages

M. Qian, Organizer, Presiding
T. Shellhammer, Organizer

1:35 192. Evidence for demethylation of 3-isobutyl-2-methoxypyrazine during maturation of bell pepper (Capsicum annum) and wine grapes (Vitis vinifera). I. Ryona, G. Sacks

2:00 193. Free and potential aroma compounds and sensory profile in long-time grape skin macerated white wines. G. Versini, B. Fedrizzi, R. Ferrarini, F. Finato, E. Casarotti, G. Piubelli, M. Cipriani


3:35 196. On the flavor of Bourbon Whiskey: How the manufacturing process influences the concentrations of its key aroma molecules. **P. H. Schieberle**, M. Vocke


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Section B

Boston Convention & Exhibition Center
Room 161

**General Papers**

A. Mitchell, *Organizer, Presiding*
N. Da Costa, *Presiding*

1:35 199. Seed's protein and oil content, fatty acid composition, and growing cycle length of a single genotype of chia (*Salvia hispanica* L.) as affected by environmental factors. **R. Ayerza**

1:55 200. Extra virgin olive oil increases uncoupling protein 1 content in brown adipose tissue, and enhances noradrenaline and adrenaline secretions in rats. **Y. Oi-Kano**


3:10 203. Phytochemical analysis and antioxidant efficacy of fruits produced in Italy. **N. Tsafantakis**, S. Pacifico, M. Scognamiglio, S. Piccolella, B. D'Abrosca, A. Fiorentino

3:30 204. Transcriptional control of alkaloid biosynthesis by methyl jasmonate in *Catharanthus roseus* hairy root cultures. **S. Goklany**, R. H. Loring, J. Glick, C. W. Lee-Parsons

3:50 205. Molecular cloning and characterization of a novel down-regulated TOM20 gene associated with the onset of tapping panel dryness (TPD) syndrome from the inner bark tissues of rubber tree (*Hevea brasiliensis* Muell. Arg.) by mRNA differential display. **V. Perumal**

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Section C

Boston Convention & Exhibition Center
Room 159

**New Perspectives on Antioxidants**
J. Finley, Organizer, Presiding

1:35 206. Relating in vitro research on the antioxidant impact of crucifer components to dietary redox regulation. E. Jeffery

2:05 207. Too much of a good thing: Risk of over-antioxidation. X. Lei

2:35 208. Regulation of the iron storage protein ferritin by the antioxidant responsive element. K. J. Hintze

3:20 209. Antioxidant adaptation and signaling in response to physical exercise. L. Ji

3:50 210. Dietary antioxidants: From activating Nrf2 signaling to genomics in prevention of cancer. A. Kong

THURSDAY MORNING

Section A

Boston Convention & Exhibition Center
Room 160A

Small Wonders: Peptides for Disease Control

K. Rajasekaran, Organizer, Presiding
Cosponsored by BIOT

8:35 211. Application of small molecule microarrays in high-throughput screening of protein targets. M. Uttamchandani

9:05 212. Plant antimicrobial peptides: Thionins as nature's invention for weapons of mass protection. S. Oard, T. Chouljenko, N. Maiti, F. Enright


10:50 215. Transformation of antimicrobial peptides from frog skin into therapeutically valuable anti-infective agents. J. Conlon

Section B

Boston Convention & Exhibition Center
Room 161

Caffeine and Other Natural Product Stimulants

J. Weil, Presiding
E. Demejia, Organizer

8:40 216. Caffeine: Health benefits and safety concerns. E. Gonzalez de Mejia
9:00 217. On the circumstances which modify the action of caffeine: The scope of science since Runge's discovery until nowadays. **J. G. Weil**


10:00 220. Natural components in yerba mate tea and coffee byproducts enhance antioxidant capacity, inhibit lipid synthesis, and suppress body fat and lipogenic genes. **E. Gonzalez de Mejia**, **M. Heckman**

Section C

Boston Convention & Exhibition Center
Room 159

**Antioxidants and Health**

J. Finley, *Organizer*

8:35 221. Antioxidants in black rice bran. **Z. Xu**, **S. Jang**, **X. Yue**

9:05 222. Soybean antioxidant properties affected by food processing and *in vitro* digestion. **K. Zhou**

9:35 223. Health effects of natural antioxidants from the selected edible botanical materials. **L. Yu**


11:20 226. Influence of extraction methodology on the assay of antioxidant phenolic compounds. **D. Luthria**

**THURSDAY AFTERNOON**

Section A

Boston Convention & Exhibition Center
Room 160A

**Small Wonders: Peptides for Disease Control**

K. Rajasekaran, *Organizer, Presiding*

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1:35 227. NMR structural insights on the function of antimicrobial peptides. **A. Ramamoorthy**

2:05 228. Synthetic antimicrobial peptides as novel pesticides for plant disease control. **E. Montesinos**

2:35 229. Antimicrobial and immunomodulatory peptides for combating infections. **R. E. Hancock**

3:50 231. In vitro effects of two newly designed lytic peptides LHRH conjugates on prostate cancer. S. M. Sharp

Section B

Boston Convention & Exhibition Center
Room 161

General Papers

N. Da Costa, Presiding
A. Mitchell, Organizer

1:35 232. Activation energy measurements of cheese. M. H. Tunick


3:30 236. Foliage extracts of conifers as potential sources for isolation of shikimic and quinic acids, precursors to Tamiflu®. L. Gedvinne Vithanage, B. J. Cole, R. C. Fort Jr., J. M. Genco, A. Shaffer, M. Rowe

3:55 237. Efficacy of Ichthyophthirius vaccines in channel catfish against white spot disease. D. Xu, P. Klesius, C. Shoemaker

Section C

Boston Convention & Exhibition Center
Room 159

Antioxidants and Health

J. Finley, Organizer

1:35 238. Pterostilbene reduces colon tumor multiplicity and inflammatory markers in animal models of colon cancer. A. M. Rimando, S. Paul, N. Suh

2:05 239. Multifunctional branched gold nanoparticle for prevention of cancer cells. P. C. Ray

2:35 240. Chitosan grafted with phenolics to promote antioxidant activities. S. B. Schreiber, S. Zivanovic

3:20 241. Bioassay-guided isolation and EPR-assisted antioxidant evaluation of two valuable compounds from mango peels. L. Jiang, S. He, Y. Pan
Urinary excretion of phenolic acids in rats fed cranberry, blueberry, or black raspberry. R. Khanal, S. E. Wilkes, T. J. Rogers, L. R. Howard, R. L. Prior