



CORNUCOPIA

including the AGFD program for the
254th American Chemical Society National Meeting

August 20 - 24, 2017

in

WASHINGTON D.C.
BRIAN GUTHRIE, Program Chair

Attend AGFD
technical sessions
at the Washington
Convention
Center

Dear Readers – Starting with this issue, the printed Cornucopia is on a paper-saving ‘green’ diet and will not include AGFD abstracts. Find AGFD abstracts in the expanded Cornucopia posted on the AGFD website.

Join the AGFD Awards Banquet
Tuesday, August 22, 5:30-8:00 pm
at
B Too
1324 14th Street NW
(directions below)

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Directions to AGFD Awards Banquet – from the Convention Center L Street entrance proceed west (with traffic) to 10th St. Turn right and continue north on 10th St. to N St. Turn left and continue westbound on N St. to 14th St. Cross 14th St. and turn right. Continue north on 14th St. a half block. B Too will be on your left.

Visit our website - agfd.sites.acs.org - for a pdf of Cornucopia, job postings, awards, and much more.

Check out our Facebook page - www.facebook.com/agandfood We're on LinkedIn, too!

Deadline for submission of content for Spring Cornucopia: Jan 15.

MESSAGE FROM THE CHAIR

As I complete my service as the 2017 Chair of the Agricultural and Food Chemistry Division (AGFD) of the American Chemical Society (ACS), I reflect on the three goals, which were developed at our division's 2016 Strategic Planning Retreat. These are: 1) continue and expand high quality technical offerings, 2) increase engagement of existing and new members in AGFD activities, and 3) increase stakeholder engagement by expanding cooperative programming and other offerings with outside organizations, internal and external to the ACS. Similar to the past decade, the future holds numerous challenges and opportunities for the field of agricultural and food chemistry. AGFD is the flagship division of the ACS, which advocates for safe, nutritious, and sustainable food and agricultural supplies that meet global challenges. Clearly, it is imperative that AGFD members remain actively involved if we are to accomplish the aforementioned goals over the next five years.

In line with goal 1, AGFD continues to provide outstanding technical programs. For example, the 253rd ACS spring meeting in San Francisco had 15 symposia, 31 sessions, and 270 papers comprised of 187 oral and 83 poster presentations. The current 254th fall meeting in Washington DC comprises 16 symposia, 36 sessions, and 277 papers including 46 poster and 231 orals. Other progress towards goal 1 includes the development of an AGFD future program committee, and the drafting of a new strategy and funding model for national meeting programming. On a personal note, I am especially passionate about championing goal 2 (engaging existing members and recruiting new members) and challenge each existing AGFD member to recruit three new members over the next year! An AGFD committee has advanced goal 2 by creating a new process for soliciting symposium proposals from AGFD members. As for goal 3, a committee has been formed to develop strategies for co-organizing synergistic symposia/technical programs with national organizations such as IFT, SOT, AOAC, etc.

The AGFD Awards Banquet, a ticketed event, will be held at B Too located at 1324 14th Street NW with a cocktail reception from 5:30-6:00 PM followed by dinner from 6-8:00 PM. Ronald Wrolstad from Oregon State University won the Division's Award for Advancement of Application of Agricultural and Food Chemistry and is being honored at the AGFD Award Symposium on Tuesday afternoon. Other 2017 awards include the Roy Teranishi Graduate Fellowship in Food Chemistry won by Tianxi Yang from the University of Massachusetts, the Withycombe-Charalambous Award for Excellence in Graduate Research in Agricultural or Food Chemistry won by Jingjing Guo from Rutgers University, the AGFD Undergraduate Award won by Marti Hua from the University of British Columbia, and Russell Rouseff from the University of Florida won the Award for Distinguished Service to the AGFD. AGFD Fellow awardees are Hang Xiao of the University of Massachusetts and Andrea Buettner of the University of Erlangen-Nuremberg in Germany and we are delighted that two AGFD members, Stephen Duke and Alyson Mitchell, are ACS Fellow awardees. The Young Scientist awardee will be announced at the banquet.

I am grateful to several AGFD members including Bosoon Park (immediate past chair), Brian Guthrie (chair-elect), Hang Ma, Michael Tunick, Stephen Toth, Carl Frey, Michael Appell, Lauren Jackson, and Alyson Mitchell. Thanks to all of the members who dedicate their time, selflessly, to advance the mission of the AGFD.

Navindra P. Seeram 2017 AGFD Chair
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FUTURE PROGRAMS**NEW ORLEANS March 18-22, 2018**

Metabolomics Diet & Effects Sourav Chakraborty Central CT State Univ. schakraborty@ccsu.edu

Chemistry of Sex Alyson Mitchell UC Davis aemitchell@ucdavis.edu Mike Tunick USDA ARS michael.tunick@ars.usda.gov Kathryn Deibler Pfizer kdd3@cornell.edu John Finley Louisiana State Univ. Jfinle5@lsu.edu Gavin Sacks Cornell Univ. gls9@cornell.edu Steven Toth International Flavors and Fragrances stephen.toth@iff.com

(C4) Communicating Chemistry: Creole Cooking Gavin Sacks Cornell Univ. gls9@cornell.edu Justin Miller Hobart & William Smith Colleges jsmiller@hws.edu Donnie Golden Fresno State dgolden@csufresno.edu

Chemistry of Spirits Mike Qian Oregon State Univ. michael.qian@oregonstate.edu Michael Granvogl Technical Univ. of Munich michael.granvogl@tum.de Keith Cadwallader University of Illinois at Urbana-Champaign cadwldr@illinois.edu

Phosphates from the Farm to the Dead Zone John Finley Louisiana State University Jfinle5@lsu.edu

Dietary Fiber: Chemistry, Physiology and Health Benefits Indika Edirisinghe Illinois Institute of Technology iedirisi@iit.edu Britt Burton-Freeman Illinois Institute of Technology bburton@iit.edu Luke R. Howard University of Arkansas ukeh@uark.edu

Chemistry and Application for Cotton Sechin Chang USDA ARS SeChin.Chang@ars.usda.gov

Energy, Water and Food Production Mike Appell USDA ARS Michael.Appell@ars.usda.gov

Environmental Effects on Gulf Coast Seafoods John Finley Louisiana State Univ. Jfinle5@lsu.edu

Impact of Climate Change on the Food, Energy, Water Nexus John Finley Louisiana State University Jfinle5@lsu.edu

Food Bioactives and Gut Microflora Liangli (Lucy) Lu U. Maryland lyu5@umd.edu

110th UMAMI Memorial Symposium: Past, Present, Future Hisayuki Uneyama Ajinomoto Co. Inc. hisayuki_oneyama@ajinomoto.com Indika Edirisinghe Illinois Institute of Technology iedirisi@iit.edu

Kenneth A. Spencer Award Symposium (co-sponsored by AGRO/AGFD) Eckhard Hellmuth UMKC hellmuth@umkc.edu Wallace Yokoyama USDA Wally.Yokoyama@ars.usda.gov

International Student Symposium Philipp Schmidberger Philipp Technical Univ. of Munich ph_schmidberger@gmx.de Roberta Tardugno Univ. of Modena and Reggio Emilia roberta.tardugno@unimore.it Federica Pellati University of Modena and Reggio Emilia federica.pellati@unimore.it

Career Trajectories for the Ag and Food Chemist: Panel Discussion Brian Guthrie Cargill, Inc. brian_guthrie@cargill.com

General Papers Brian Guthrie Cargill, Inc. brian_guthrie@cargill.com

General Posters Brian Guthrie Cargill, Inc. brian_guthrie@cargill.com

ACS National Meeting Theme: The Food, Energy, Water Nexus

continues on next page

continued from previous page

BOSTON August 19-23, 2018

Nano-Biotechnology in Foods and Nutraceuticals Fereidoon Shahidi Memorial Univ. of Newfoundland fshahidi@mun.ca

Bioactives and Neurodegenerative Diseases Navindra Seeram Univ. of Rhode Island nseeram@uri.edu Hang Ma Univ. of Rhode Island hang_ma@uri.edu

Characterization of Taste Modulators: Chemical, Biological and Sensorial Mathias Sukan Pfizer, mathias.sukan@gmail.com Brian Guthrie Cargill Inc brian_guthrie@cargill.com David Josephson Mane dave.josephson@mane.com

Dietary Polyphenols and Gut Microbiota Shengmin Sang NC A&T State University ssang@ncat.edu

Chemistry, Flavor and Health Effects of Teas Chi-Tang Ho Rutgers University ctho@sebs.rutgers.edu Daxiang Li Anhui Agricultural University dxli@ahau.edu.cn Zhengzhu Zhang Anhui Agricultural University zzz@ahau.edu.cn Yu Wang University of Florida yu.wang@ufl.edu

Functional Foods (with Japanese Society of Food Factors [JSoFF]) Alyson Mitchell UC Davis aemitchell@ucdavis.edu Akira Murakami University of Hyogo Japan De-Xing Hou Kagoshima University Japan

Protein, Food Structure Vermont P Dia The University of Tennessee vdia@utk.edu Yuzhu Zhang ARS/USDA yuzhu.zhang@ars.usda.gov

Health Promoting Food Ingredients Coralia Osoria Roa Universidad Nacional de Colombia cosorior@unal.edu.co

Food for Space Travel TBD (NASA-Michele- John Finley to contact)

CRISPR (Biotech. sub-division, Rashmi Tiwari)

Advances in Pathogens and Toxins Bosoon Park USDA bosoon.park@ars.usda.gov

Structure and Assembly of Food Biopolymers Qingrong Huang Rutgers University qhuang@sebs.rutgers.edu

Aroma Release Flavor Modulation of Perception TBD (Flavor sub-division)

Bioactives and Skin Health Benefits Navindra Seeram U. of Rhode Island nseeram@uri.edu Hang Ma U. of Rhode Island hang_ma@uri.edu Kelly George L'Oreal USA KGEORGE@rd.us.loreal.com

ACS National Meeting Theme: Nanotechnology

BEYOND 2018

Emerging Trends in Nano-bioactives for the Prevention of Chronic Diseases Bhimu Patil Texas A&M Univ. b-patil@tamu.edu G. K. Jayaprakasha Texas A&M Univ. gkjp@tamu.edu

Food Packaging Materials John Finley Louisiana State University jfinle5@lsu.edu Michael Morello PepsiCo mike.morello@pepsico.com

Chemistry of Mediterranean Foods (co-sponsor: IAC) Ellene Tratras Contis Eastern Michigan University econtis@emich.edu Agnes Rimando USDA, ARS agnes.rimando@ars.usda.gov

First International Flavor and Fragrance Conference

The First International Flavor and Fragrance Conference met in Cartagena, Colombia May 10-12, 2017 (<http://iffunalacs.unal.edu.co/flavor-chemistry-workshop/>) largely due to contributions from Dr. Coralia Osorio of the Department of Chemistry, National University of Colombia, Bogotá, Colombia, and her team. Prior to the Conference, 30 students attended a 2 day flavor workshop where researchers from academia as well as food and flavor industries provided an overview on flavor chemistry, flavor analysis, flavor-food interaction, and processing of flavor and fragrance materials.

The Conference received 50 abstracts and attracted >100 people from around the world. All conference attendees received an invitation to join AGFD. Featured Conference speakers included Terry Acree (Cornell Univ.) on sensation, Gary Beauchamp (Monell Chemical Senses Center) on flavor pleasure, Charles Spence (Oxford Univ.) on Neuroscience, Mary Ann Drake (North Carolina State Univ.) on sensory analysis, Fereidoon Shahidi (Memorial Univ. of Newfoundland) on lipid off-flavor, and Gary Reineccius (Univ. of Minnesota) on flavor encapsulation.

Great discussions and interactions took place in and out the sessions and generated huge interest to continue the Conference in other countries (Chile, Panama, Brazil). The organizing committee (Michael Qian, Gary Reineccius, Fereidoon Shahidi, Coralia Osorio) plans a 2nd International Flavor and Fragrance Conference in 2019 in Chile.

Thanks to Michael Qian for reporting on this event and providing the photo, below.



AGFD Division Vision and Mission Statements

Vision

Enhance quality of life by advocating safe, nutritious and sustainable food and agricultural supplies that meet global challenges.

Mission

Lead and foster a diverse community to promote and advance agricultural and food chemistry research, education, outreach and communication.

ELECTION OF DIVISION COUNCILORS

If you are a full member of AGFD, please mark the ballot below, **SIGN IN THE SPACE PROVIDED**, and print your name legibly beneath the signature. Fold the page on the dotted lines so that the ballot is on the inside and the mailing address on the outside. Tape or a staple the open edges, affix postage and mail. Ballots must be received by November 1, 2017. After your membership is verified, the portion of the form with your signature and name will be removed prior to opening and counting the ballots. Thank you for exercising your democratic franchise.

----- fold up -----

Vote for 2 Councilors for the 2018 - 2020 term (or write in your own candidate)

John Finley

Lauren Jackson

or write in _____

John Finley is a Councilor whose term expires in 2017. Lauren Jackson is an Alternate Councilor who is running for Councilor.

and

Vote for 1 Alternate Councilor for the 2018 - 2020 term (or write in your own candidate)

Keith Cadwallader

or write in _____

Keith Cadwallader is an Alternate Councilor whose term expires in 2017.

----- fold down & tape -----

member
signature _____
member
printed name _____

affix
stamp

to **Michael H. Tunick**
USDA-ERRC
600 E. Mermaid Lane
Wyndmoor PA 19038

INSIDE THE BELTWAY

1	2	3	4	5	6	7	8	9	10	11		
12					13				14		15	16
17					18				19	20		
21				22			23		24			
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77			78		79				80			
		81			82				83			

A prize to the first send
a correct solution to Carl Frey
(via smartphone photo/e-mail) to -
cfreyenterprise@gmail.com

Congratulations to the first to
submit a correct solution of the
Spring 2017 crossword -
Maddie Barnett of Texas Christian U.

Kudos to another solver -
Emily Cooper of Duquesne U.

ACROSS

- 1 chipmaker (w/39 Across)
6 I smell ----
10 -- *Mice and Men*
12 exterior
13 Lady ----
14 use a rotary phone
17 Naval -----, the US
VP's official residence
20 pro 2nd amendment org.
21 actress: ---- Cannon
22 anger
23 dangers
25 'Be Prepared' org.
27 home of 31 Down
29 deep space listeners
30 John --- Lennon
32 scram!
35 ACS -- & (1 Down) Div.
37 Hawaiian goose
39 see 1 Across
40 PC alternative
42 choose
44 Chevy maker
45 -- *Had to Be You*
- 46 river bordering DC SE
48 white pigment: -- O2
49 -- bill or -- tract
50 ovum
51 winning Olympic skater
52 fate
53 sorry, my mistake!
55 'Web' writer: -- White
57 Hey, I'm talking to --- !
58 winners
59 element used in red lights
61 -- GYN
63 --- Diego or --- Francisco
65 smartly dressed
67 Aires the ---
70 cook on a hot surface
73 transports in Chicago
74 the Smithsonian's most
popular museum
77 most populous continent
79 *The --- Panther*
80 philosopher Georg WF-----
81 last year of HS
82 Pepsi or Mtn Dew
83 start of year in Mexico

DOWN

- 1 see 35 Across
2 red corundum gemstone
3 blue-labeled cigar message
4 high school years
5 hockey great Bobby ---
6 Petri dish gel layer
7 evaluated, as a movie
8 in the past
9 temporary roof cover
10 medicate to excess
11 limited
15 neighborhood west of DC
16 --- Cruces or --- Vegas
18 III + III
19 affirmative
24 ----- Wreck or ----- Car
26 getting older, like wine
28 alkaline earth of bones
30 prefix meaning 'a few'
31 formerly the Expos
33 PR office concern
34 companion of Tic & Toe
36 haven't any
38 sends out
- 41 pigeon talk
43 religiously reverent
46 a writer with morals
47 short of cash or confidence
52 ancestry
54 refreshing colas
56 aroma of the unwashed
60 org. for teachers
62 livestock marking
64 a tree w/leaves that quake
65 org. for narcs
66 tears or criticizes
68 '*My Way*' composer
69 OR and ER worker
71 tennis player with an
unreturnable serve
72 corporate move
75 --- Grande or --- de Janeiro
76 --- *Loves You*
(Yeah, Yeah, Yeah)
78 ~1% of earth's atmosphere

AGFD DIVISION MEMBERSHIP APPLICATION

The Agricultural and Food Chemistry Division (AGFD) of the American Chemical Society (ACS) is a non-profit organization dedicated to the technical advancement of all aspects of agricultural and food chemistry. AGFD encourages technical advancement in the field by -

- organizing symposia/workshops on agricultural/food chemistry at ACS national meetings and other venues
- publishing proceedings of AGFD symposia
- publishing the *Cornucopia* newsletter
- hosting social and networking gatherings at ACS national meetings
- providing cash awards and recognition to leading undergraduate and graduate students, young scientists and established scientists in the field of agricultural and food chemistry

Join the 2500 members of AGFD. At ACS National Meetings you can meet and discuss division activities at the AGFD Information table located near the AGFD technical session rooms. Join us via the membership application form (below) or on-line at www.acs.org (click on Membership & Networks, Technical Divisions, Join a Technical Division) or call ACS (800)333-9511 (in US) or 616-447-3776 (outside US). Payment by Visa/Master Card or AmEx.

APPLICATION FOR AGFD DIVISION MEMBERSHIP (7623P)	
Title	
Name	
1 st address line	
2 nd address line	
City	
State	
Zip code	
Country	
e-mail address	
Phone	
check one	MEMBERSHIP FEE
<input type="checkbox"/>	I am an ACS member and wish to join AGFD (\$10.00)
<input type="checkbox"/>	I am not an ACS member and wish to join AGFD (\$15.00)
<input type="checkbox"/>	I am a full time student and wish to join AGFD (\$10.00)
Be cool JOIN AGFD	Return application, with payment (payable to American Chemical Society), to AGFD Membership Chair: Dr. Lucy Yu University of Maryland Department of Nutrition & Food Science, 3303 Marie Mount Hall College Park MD 20742

AGFD OFFICERS & COMMITTEE LEADERSHIP

Chair - Serves 1 year. Presides over Division meetings & appoints committees
Navindra Seeram
University of Rhode Island
7 Greenhouse Road Kingston RI 02881
401-874-9367, nseeram@uri.edu

Chair-Elect - Serves 1 year. Substitutes for the chair as needed
Brian Guthrie
Cargill Food System Design
2301 Crosby Road
Wayzata MN 55391
952-742-3983 brian_guthrie@cargill.com

Vice-Chair - Serves 1 year. Assists Chair-elect. Develops future technical programs.
Xuetong Fan
USDA-ARS
Eastern Regional Research Center
600 E. Mermaid La.
Wyndmoor PA 19038
215-836-3785, xuetong.fan@ars.usda.gov

Secretary - Responsible for Division correspondence and meeting minutes.
Michael Tunick
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Eastern Regional Research Center
600 E. Mermaid La.
Wyndmoor PA 19038
215-233-6454
michael.tunick@ars.usda.gov

Treasurer - Responsible for Division finances.
Stephen Toth
International Flavors & Fragrances R&D
1515 Hwy. 36 Union Beach NJ 07735
732-335-2772
stephen.toth@iff.com

Cornucopia Editor - Edits newsletter.
Carl Frey
cfreyenterprise@gmail.com
203-918-6007

Councilors - Represent Division for 3 years on ACS council.
Michael Appell (thru '19)
michael.appell@ars.usda.gov
John Finley (thru '17) jfinle5@lsu.edu
Michael Morello (thru '17)
mjmorello226@gmail.com
Agnes Rimando (thru '18)
agnes.rimando@ars.usda.gov

Alternate Councilors - Substitute when Councilors can not attend Council meetings. Serves 3 years.
Charles Brine (thru '18)
brinec11@verizon.net
Keith Cadwallader (thru '17)
cadwldr@uiuc.edu
Lauren Jackson (thru '19)
lauren.jackson@fda.hhs.gov
Alyson Mitchell (thru '19)
aemitchell@ucdavis.edu

At-Large Executive Committee Members - Assist managing Division. Serves 3 years.
Terry Acree (thru '18) tea2@cornell.edu
Jane Leland (thru '17)
JaneLeland@ameritech.net
Robert McGorin (thru '17)
robert.mcgorin@oregonstate.edu
Mathias Sukan (thru '18)
mksukan@pfizer.com

Awards Committee - Solicits nominations, oversees awards process.
Chair Michael Morello
Mjmorello226@gmail.com
Student Awards Chi-Tang Ho
ho@aesop.rutgers.edu
Fellow Awards Fereidoon Shahidi
fshahidi@mun.ca
Canvassing Stephen Toth
stephen.toth@iff.com

Finance - Monitors the Division's finances for 1 year. Filled by Immediate Past Chair
Bosoon Park, bosoon.park@ars.usda.gov

Hospitality - Organizes receptions and banquets.
Charles Brine brinec11@verizon.net

Membership - Recruits and retains Division members.
Lucy Yu lyu5@umd.edu

Multidisciplinary Program Planning helps coordinate nat'l mtg programming
John Finley jfinle5@lsu.edu

Nominations - Develops officer slate Served by Immediate Past Chair.
Bosoon Park, bosoon.park@ars.usda.gov

Public Relations - Publicizes Division.
Charles Brine - brinec11@verizon.net

Web Master - Maintains web site.
Michael Appell
michael.appell@ars.usda.gov

Sub-divisions Develop symposia.

Flavor
Chair, Ryan Elias elias@psu.edu
Chair-Elect, Julie Anne Grover
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Vice-Chair, Elizabeth Kreger
Liz.Kreger@adm.com
Secretary, Tony Shao
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2018 Secretary, GK Jayaprakasha
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Functional Foods & Natural Products
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Secretary, Youngmok Kim
ykim@synergytaste.com

Food Safety
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bosoon.park@ars.usda.gov
Chair-Elect, Alyson Mitchell,
aemitchell@ucdavis.edu
Vice Chair, Michael Granvogl
michael.granvogl@tum.de
Secretary Xiaohua He,
xiaohua.he@ars.usda.gov
2018 Secretary, Juhong Chen
juhong@cornell.edu

AWARD NEWS

J. Bruce German received the 2017 **Kenneth A. Spencer Award** for Outstanding Achievement in Agricultural and Food Chemistry. The award is given by the Kansas City Section of the ACS. The Spencer Award, the most prestigious ACS award recognizing advancements in agricultural and food chemistry is the latest of the numerous awards he has received for his work on the health impacts of dietary fats and milk. He is currently a Professor of Food Science and Technology at the University of California, Davis.

John A. Pickett has won the 2017 **Sterling B. Hendricks Award** for Outstanding Achievement in Agricultural and Food Chemistry. The award will be presented at a lecture co-sponsored by the AGFD and AGRO divisions of the ACS at the ACS National Meeting in Washington for his work on the chemistry of plant-insect interactions, integrated pest management and chemical ecology. He is currently a Director at Rothamsted Research, UK.

Ron Wrolstad has won the 2017 **Award for the Advancement of Application of Agricultural and Food Chemistry**. This award recognizes outstanding contributions to pure and applied agricultural and food chemistry. The award presentation will take place at the AGFD banquet at the 2017 Fall ACS National Meeting and celebrates his career of research on correlation of natural chemical components, especially color components of foods, with food quality. He is a Distinguished Professor Emeritus of Food Science and Technology at Oregon State University.

Hang Xiao of the University of Massachusetts and **Andrea Buettner** of the University of Erlangen-Nuremberg in Germany received **AGFD Fellow Awards** for 2017. The AGFD Fellow Award recognizes outstanding scientific contributions to the field of agricultural and food chemistry.

Steven O. Duke of the USDA-ARS and **Alyson Mitchell** of UC Davis received 2017 **ACS Fellow Awards**. The award recognizes individuals that impact agricultural and food chemistry through their excellence in leadership, management, teaching, research and volunteer service.

Tianxi Yang of the University of Massachusetts received the 2017 **Roy Teranishi Graduate Fellowship** in Food Chemistry. This honor goes to a beginning graduate student with an outstanding graduate GPA who shows promise of an excellent research career.

Jingjing Guo of Rutgers University won the 2017 **Withycombe–Charalambous Award** for Excellence in Graduate Research in Agricultural or Food Chemistry. She presented a paper at the Spring 2017 ACS National Meeting in San Francisco describing her work on the prevention of obesity and type-2 diabetes with aged citrus peel extract.

Marti Hua of the University of British Columbia won the 2017 **AGFD Undergraduate Student Award** for work on cytotoxicity of tert-butyl hydroquinone.

AGFD congratulates all these awardees and looks forward to their continued successes and contributions.

Executive Committee Meeting Minutes

Monday, April 3, 2017 Hilton Union Square, San Francisco, CA

Takes place at each ACS National Meeting

Attendees: Terry Acree, Michael Appell, Kathryn Deibler (on phone), Indika Edirisinghe, Xiaohua He, Xuotong Fan, John Finley, Brian Guthrie, Eckhard Hellmuth, Lauren Jackson, Hang Ma, Alyson Mitchell, Michael Morello, Bosoon Park, Bhimu Patil, Agnes Rimando, Navindra Seeram, Tony Shao, Stephen Toth, Michael Tunick, Wally Yokoyama

AGFD Chair Navindra Seeram called the meeting to order at 5:00 p.m. Those present introduced themselves. The **minutes** of the previous meeting were approved with no changes.

Stephen Toth gave the **Treasurer's Report**. The total assets for the division are \$643,700. Our major revenue sources for the first three months of 2017 were the ACS allotment (\$26,000) and dues (\$10,750). The worst performer of our seven investments was cashed in. The total expenses for the Philadelphia meeting amounted to \$28,650, with no high costs. Over the last three years, expenses were higher for meetings in San Francisco, San Diego, and Boston. The cost to the division for the poster session with refreshments, which was in a separate room in Philadelphia, was \$2170. We shared with other divisions in a huge room at this meeting, which did not lead to the desired intimate atmosphere. John Finley suggested inviting other divisions such as AGRO and ANYL to our poster night. The net cost of the banquet at Drexel University was only \$2900.

Brian Guthrie reported that the San Francisco AGFD **Program** has 14 symposia and 31 sessions. The total attendance is over 18,000. We expect an estimated cost of \$43,000 for Washington, DC in the fall (theme: Chemistry's Impact on the Global Economy). This budget was passed. We are trying for more symposia to fit the theme in New Orleans (The Food, Energy, Water Nexus, March 2018). Navindra reported for Michael Qian that first **International Flavor and Fragrance Conference** will held in Cartagena, Columbia on May 10-12, 2017. They have 50 abstracts and 90 registrants so far, mostly from South America.

In **Subdivision** reports, Flavor Secretary Tony Shao said that they have a symposium proposed for 2018. They are trying for external funds. Functional Foods and Natural Products Secretary Hang Ma said they will try to increase their profile at local and regional meetings. John Finley reported for Biotechnology Chair Rashmi Tawari, stating that they have a symposium scheduled for the Boston meeting. Nutrition Chair Indika Edirisinghe also reported that his subdivision is planning a symposium. Food Safety Chair Bosoon Park said that they have a symposium at this meeting and will have two in Washington, DC.

Mike Appell, John Finley, Mike Morello, and Agnes Rimando gave the **Councilor's Report**. Mike Appell reported on a number of issues. Divisions for Space Chemistry and for Materials Chemistry have been proposed for next year, though negotiations are continuing. John said that the Space Division people need to be more organized and that Materials wants to feed off of other divisions, similar to Secretariats. Mike Morello pointed out that joining ACS online kicks the person out of the system before a division membership can be chosen, and that there will be division tables at Sci-Mix in Washington. He also said that many divisions support dropping Thursday programming, but the increase in symposia would create the need for more room on the other days, which would increase costs. The money required for audio-visual needs is over \$18,000 at this meeting. John and Mike Appell are on the **Divisional Activities Committee**, where there are thoughts about having an atmosphere in technical divisions similar to that at Gordon Conferences. They pointed out that AGFD participated in the pilot business planning workshop. Agnes Rimando is on the **International Activities Committee**, and reported that there are now 19 international chapters, which are looking for more recognition.

There have been recommendations to move the March 2021 meeting out of San Antonio because of the "bathroom bill" Texas is considering. INOR is not going to program there if the bill is passed, and other divisions are considering the same. ACS has guaranteed millions of dollars to be there, and would lose it if the meeting is moved.

Immediate Past Chair Bosoon Park gave the **Nominations** report. The Councilor terms of John Finley and *continues on next page*

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Mike Morello will expire at the end of the year. John will run again and Mike will not. Lauren Jackson will run for Councilor, which would leave her Alternate Councilor position open. According to the AGFD bylaws, the vacancy may be filled until the next annual election by appointment by the Executive Committee. Keith Cadwallader's term as Alternate Councilor expires at the end of the year and he will run again. This slate was approved. The At-Large Executive Committee terms of Robert McGorin and Jane Leland also expire on December 31; Bob will continue but we are not yet sure about Jane.

Awards Committee Chair Mike Morello said that five people were nominated for the Award for the Advancement of Application of Agricultural and Food Chemistry, and that Ron Wrolstad won. The procedure from here on will be to notify the winner and then the Secretary so that the Executive Committee can be emailed for approval. Then the award symposium would be organized. The AGFD Fellow Awards have not been chosen yet. Navindra reported for Chi-Tang Ho that the Roy Teranishi Graduate Fellowship in Food Chemistry went to Tianxi Yang, University of Massachusetts. The winners of the student competitions will be announced at the reception (the AGFD Undergraduate Award winner was Marti Hua, University of British Columbia and the Withycombe-Charalambous Award for Excellence in Graduate Research in Agricultural or Food Chemistry went to Jingjing Guo, Rutgers University). Mike Tunick reported that the Sterling Hendricks Award will go to John A. Pickett, Rothamsted Research, UK.

Kathryn Deibler, Mike Morello, and Agnes Rimando had met earlier about restructuring student award symposia, which have had poor attendance and low returns on investment. They proposed changing both symposia to posters only. After discussion, it was decided to keep the Graduate Award as oral presentations (possibly integrated with the General Session to increase attendance) and shifting the Undergraduate Award to posters. The undergrads may be required to state why they want to be in the AGFD program. Kathryn also proposed that the AGFD Young Scientist Award revert to the earlier format of selecting one winner. This person would receive up to \$1000 for travel expenses. This talk is now in the Journal award symposium and would remain there. A motion to approve the change was passed.

Eckhard Hellmuth reported that the Kenneth Spencer Award was won by J. Bruce German, who will have a symposium at the spring meeting. Our nominees for ACS Fellow Awards are Thomas Hofmann, Lucy Yu, and Alyson Mitchell. Bosoon Park, Agnes Rimando, and Lauren Jackson, respectively, are championing these nominations. Mike Morello nominated Russell Rouseff for the Award for Distinguished Service to the Division of Agricultural and Food Chemistry, and he was approved.

Agnes Rimando gave a recommendation from the **Strategic Planning Meeting**. Instead of an automatic \$1000 allocation for each symposium session, it would be better to allocate \$500 with extra money to be provided for extras such as new topic ideas or a symposium series book. She also suggested one symposium for all awards.

Cornucopia editor Carl Frey sent a report saying that he had fewer copies printed this time and that there was some consideration to delete the abstracts, which would save \$1000 in printing costs and make the meeting greener. A motion to this effect was made and passed.

In **Hospitality/Public Relations**, Alyson Mitchell handled the reception arrangements for this meeting (at Bluestem Brasserie) and volunteered to do the same in Washington.

Membership Chair Lucy Yu sent a report stating that AGFD had 2522 members as of January 31, which was a decrease over the previous year. We should try to recruit more at regional meetings, email presenters, make the membership brochure more attractive, and hand them out at the reception. We can look into an app for allowing new members to pay on site. Twenty-three members will receive 25-year pins, including Brian Guthrie and Lauren Jackson, who were recognized.

Journal Editor-in-Chief Thomas Hofmann sent a report stating that 1257 papers were published last year with 91,000 citations and 2.1 million article requests. The advisory board increased by three people. Ten won excellence in reviewing awards. Shengmin Sang won the 2015 JAFC/AGFD research article of the year award. John Finley noted that they are having trouble getting enough reviewers.

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In **Communications**, Mike Appell and Alyson Mitchell reported that everything is going well with the web site and email blasts.

There was no **Old Business. In New Business**, John Finley proposed appointing a person to provide consistency in programming continuity. Mike Morello was suggested and he accepted.

Agnes Rimando reported that the first ACS Asia-Pacific International Chapters Conference will be held in Korea on November 5-8, 2017. The president of ACS will speak there. AGFD will provide some sponsorship. Two graduate students may apply for travel support; the supervisors of those students must be AGFD members. The poster session competition winner will receive \$50.

Navindra Seeram said he received a request for division support for a chemistry of fermentation symposium to be held at the Southeast Regional Meeting to be held in Charlotte, NC on November 7-11. We will ask the requestor to help recruit AGFD members. \$500 of support was approved.

The AGFD membership dues will remain the same for 2018: \$10 for regular and student members, \$15 for division affiliates (non-ACS members) and society affiliates (not eligible for ACS membership), and free for emeritus (50 years in ACS) members.

The meeting adjourned at 6:57 p.m. *Submitted by Michael Tunick, AGFD Secretary*

AGFD Technical Program

Note to readers – starting with this Fall 2017 issue, the printed Cornucopia is on a paper-saving 'green' diet and will not include Abstracts of AGFD papers. Find the AGFD Abstracts in the expanded version of the Cornucopia posted on the AGFD website. The printed and on-line Cornucopia will still include the complete Technical Program. The ACS website also posts all abstracts for the National Meetings.

SUNDAY MORNING August 20 Convention Center Room 144B Section A

From Fermentation to Fume Hood: The Chemistry of Wine financially supported by E&J Gallo, Constellation Brands, Agilent Technologies
D. L. Capone, Organizer G. L. Sacks, Organizer, Presiding

8:30 1. Characterising the chemical and sensory properties of Australian rosé wines. J. Wang, D.L. Capone, J.M. Gambetta, K.L. Wilkinson, D.W. Jeffery

8:55 2. Relating chemical measurements of wine to olfactory perceptions. T.E. Acree

9:20 3. Investigations of aroma compounds and sensory profiles affected by the addition of grape leaves or stalks in a red wine fermentation. D.L. Capone, A. Barker, W. Pearson, L. Francis

9:45 4. Aromatic complexity of two premium wines revealed by gas chromatography combined to olfactometry and mass spectrometry. S. Carlin, R. Magri, C. Lotti, U. Vrhovsek, F. Mattivi

10:10 Intermission

10:30 5. Aroma-migration during the bottling of wine - combining a sensory and analytical approach. U. Fischer, J. Vestner, H. Schmarr, M. Mathes

10:55 6. Development of carotenoids and C13-norisoprenoids in *Vitis vinifera* L. Cv. Pinot noir grapes. F. Yuan, M.C. Qian

11:20 7. Assessing smoke taint risk based on the composition of smoke exposed grape berries and the resulting wines. T.S. Collins

Food Additives & Packaging Emerging Trends in Food Ingredient Chemistry

Convention Center Room 144C Section B
L. T. Cureton, V. Komolprasert, Organizers D. L. Doell, R. Shah, Organizers, Presiding

8:00 Introductory Remarks

8:05 8. Stability of fish oil in cross-linked alginate microcapsules prepared by spray-drying. S.A. Strobel, B.M. Arbaugh, K.A. Hudnall, H.B. Scher, N. Nitin, T. Jeoh

8:30 9. Bioparticle-Based pesticide degradation using enzyme immobilization. P. Pourtaheri, A. Shakeel, Z. Davis, S. Zomorodi, J. Frank, M. Kester, S. Moshasha

8:55 10. Hydrogenation of soybean oil without trans-fatty acids using high voltage atmospheric cold plasma (HVACP). K. Keener, X. Yopez

9:20 11. Spectroscopic portable devices and chemometric analysis for table-top sweetener quantitation. B.J. Yakes

9:45 Intermission

10:00 12. MCPD- and glycidyl-esters in palm oil: Mechanisms of formation and opportunities for effective mitigation. B.D. Craft, F. Destailats, K. Nagy

10:25 13. Acrylamide in food: Formation, analysis and exposure assessment. L. Jackson
10:50 14. Assessment of dietary exposure to 4-methylimidazole (4-MEI) for the U.S. population based on quantitative data from foods containing caramel color. D. Folmer, D.L. Doell, H. Lee, G.O. Noonan, S.E. Carberry
11:15 15. Optimization in the production of caramel colors. C. Llewellyn
11:40 Concluding Remarks

Link between Dietary Inputs, Stressors & the Gut Microbiome: Military Perspective

Convention Center Room 149A Section C
J. Karl, J. W. Soares, Organizers S. Arcidiacono, K. Racicot, Presiding
8:30 Introductory Remarks
8:35 16. Military-relevant stressors, diet, and the gut microbiome. J. Karl
9:10 17. Microbial endocrinology as a mechanism governing the interplay between diet, stress and the microbiome on host health and behavior. M. Lyte
9:55 Intermission
10:15 18. Bacterial metabolism of carbohydrates, dietary fiber and gut health. B. Hamaker
11:00 19. Grape proanthocyanidin-induced bloom of gut microbe *Akkermansia muciniphila* precedes intestinal gene expression changes associated with metabolic resilience. L. Zhang, R.N. Carmody, H. Kalariya, K. Moskal, P. Kuhn, P.J. Turnbaugh, I. Raskin, D. Ropchand
11:35 20. Influence of prebiotic fibers on gut microbiome and implications for mineral absorption and bone health. M. de Souza, L. Spence, K. Karnik, K. Canene-Adams, C.M. Weaver

Recent Advances towards the Bioeconomy

sponsored by CELL, cosponsored by AGFD, CARB, ENFL, ENVR location: Grand Hyatt Washington Penn Quarter A/B

Green Polymer Chemistry: Biobased Materials & Biocatalysis Biobased Materials: Industrial Perspectives

sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

SUNDAY AFTERNOON August 20 Convention Center Room 144B Section A

From Fermentation to Fume Hood: The Chemistry of Wine Polyphenolics & Wine Macromolecules

financially supported by E&J Gallo, Constellation Brands, Agilent Technologies
G. L. Sacks, Organizer D. L. Capone, Organizer, Presiding
1:30 21. Tannin reacts with SO₂ during aging, yielding newly discovered flavan-3-ol sulfonates in wine. A.L. Waterhouse, L. Ma, B. Addison, A.A. Watrelot

1:55 22. Mechanism of anthocyanin extraction during red wine fermentation. A. Oberholster, C. Medina Plaza, J. Beaver, L.A. Lerno, R. Ponangi, T. Blair, D.E. Block
2:20 23. High resolution mass spectrometry approaches to characterize wine polyphenols. V. Cheynier
2:45 24. Cap on red wine macromolecules? Updates on how winemaking interventions influence tannin and polysaccharide composition in Shiraz wines. K. Bindon, S. Kassara, C. Curtin, S. Li, J. Hixson, B. Teng, K. Wilkinson, P. Smith
3:10 Intermission
3:30 25. Structural studies on three *Vitis vinifera* thaumatin-like proteins and their hazing potential in white wines. M. Marangon, S.C. Van Sluyter, E.J. Waters, R.I. Menz
3:55 26. Soluble cell wall polysaccharides and their relationship with wine mouthfeel and taste. H. Chong, M.T. Cleary, N. Dokoozlian, C. Ford, G. Fincher
4:20 27. Integrated approach to managing alcohol levels in wine while maintaining quality and style. R. Ristic, O. Schelezki, A. Hranilovic, S. Li, D. Pham, D. Wollan, K. Bindon, P. Boss, V. Stockdale, D.W. Jeffery, V. Jiranek, K. Wilkinson

Food Additives & Packaging Analytical Challenges in Food Chemistry

Convention Center Room 144C Section B
L. T. Cureton, V. Komolprasert, Organizers D. L. Doell, R. Shah, Organizers, Presiding
1:00 Introductory Remarks
1:05 28. Determination of seven certified color additives in food products marketed in the United States. E. Miranda-Bermudez, B. Petigara Harp
1:30 29. Development of a specification method to determine unreacted raw materials, products of side reactions, and subsidiary colors in color additives using high-performance liquid chromatography. C. Tatebe, H. Kubota, A. Tada, K. Sato
1:55 30. Determination of color adulteration of green table olives by copper salts. B. Petigara Harp, P. Delmonte, P. Gray, P.F. Scholl, T. Todorov
2:20 31. Arsenic speciation method development for various food matrices. K. Laurvick
2:45 Intermission
3:00 32. Novel method for the simultaneous determination of 14 sweeteners of regulatory interest using UHPLC-MS/MS. R. Shah
3:25 33. Method development and validation for the composition of galactooligosaccharides. L. Chen, L. Liu, K. Laurvick, W. Wang
3:50 34. Development and validation of an LC-MS/MS method for the determination of sulfite in food and beverages. K. Carlos, L. Dejager
4:15 35. Development of a HPLC/PDA method for quantitative analysis of food components without the need for analytical standards. Y. Nishizaki, N. Sugimoto, K. Sato
4:40 Concluding Remarks

Link between Dietary Inputs, Stressors & the Gut Microbiome: Military Perspective

Convention Center Room 149A Section C

S. Arcidiacono, K. Racicot, Organizers J. Karl, J. W. Soares, Organizers, Presiding

1:30 Introductory Remarks

1:35 36. In vitro fermentation to understand healthy and stressed gut microbiome metabolism. S. Arcidiacono, L. Doherty, I. Pantoja-Feliciano, K. Kensil, K. Racicot, J.W. Soares

2:10 37. Human gut microbiota modulation by prebiotics. G. Gibson

2:55 Intermission

3:15 38. The effect of sleep on the host metabolome. F. Vargas, C. Depner, A.G. Peña, R. Knight, K. Wright, P.C. Dorrestein

3:50 39. FitBiomics: Understanding elite microbiomes for performance and recovery applications. J. Scheiman

4:25 Concluding Remarks

Entrepreneurs in the Agriculture & Food Industries

cosponsored by SCHB

Convention Center Room 149B Section D

K. Goodner, J. E. Sabol, Organizers, Presiding

1:30 Introductory Remarks

1:45 40. Withdrawn

2:15 41. Inventor or entrepreneur...Did you know there was a difference?. K.M. Bazemore, R.A. Bazemore

2:45 42. Gallery of rogues: How I found myself as a part of craft distilling's vanguard. M. Strickland

3:15 43. Grow your own - for fun and profit. J. Sabol

3:45 44. Chickpea Institute: Engaging stakeholders in the agriculture and food industries. J. Sum

4:15 Panel Discussion.

Recent Advances towards the Bioeconomy

sponsored by CELL, cosponsored by AGFD, CARB, ENFL ENVR location: Grand Hyatt Washington Penn Quarter A/B

Preparing for Employment in a Global Workforce

sponsored by IAC, cosponsored by AGFD, PROF location: Marroitt Marquis George Washington Room

Green Polymer Chemistry: Biobased Materials & Biocatalysis

Developments in Biocatalysts sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

SUNDAY EVENING 5:00 - 7:00 PM August 20

Convention Center Hall C Section A

General Posters

B. D. Guthrie, Organizer

45. Spectroscopic and time-dependent density functional theory investigation of the photophysical properties of zearalenone and its analogs. M. Appell, W. Bosma

46. Evaluation of antioxidant and anticancer activities of Psidium guajava component kameferol. J. Su, H. Hu, P. Wu

47. Isoquercitrin induced metabolism disorders in cancer cells by activating the AMP-activated protein kinase pathway. J. Su, P. Wu, R. Zhang

48. Study on the antioxidant, bacteriostatic and antitumor activities of chili seed oil. Y. Wang, B. Liu, X. Wen, M. Li, K. Wang, Y. Ni

49. Measuring the value of prebiotic fibers on gut health via innovative gut model. S.E. Butler, M. de Souza, A. Hoffman, L. Spence, K. Karnik, K. Canene-Adams, M. Marzorati

50. Modeling the human gut microbiome through in vitro fermentation. L. Doherty, I. Pantoja-Feliciano, S. Arcidiacono, K. Kensil, K. Racicot, J. Soares

51. Validation of size exclusion separation following in-vitro digestion to simulate absorption. K.R. Conca, K. Kensil

52. Inhibitory effect of adlay oil nanoemulsion on melanin production in B16F10 melanoma cells and zebrafish. H. Yin Ting, Y. Ting

53. Non-thermal plasma enhanced germination and higher gamma-aminobutyric acid (GABA) concentration in brown rice. P. Chou, S. Shen, J. Wu, K. Cheng, Y. Ting

54. Nano-delivery system for bioactive ingredients using different methods: Structure and release behaviors. S. Wenbei

55. Evaluation of estrogenic activity of the novel bisphenol-A alternative, four bisguaiacol-F compounds. Y. Peng, C. Wu, K. Reno, M. Guo

56. Sample preparation and analysis of di- and tetra-brominated C18 triacylglycerides (TAG-Br2 and TAG-Br4) in various rat tissues. K. Woodling, G. Gamboa da Costa

57. Metabolomic analysis of commercial cranberry supplements. J. Turbitt, C.C. Neto, K. Colson

58. Mechanistic analysis of arylalkylamine N-acyltransferases in *Tribolium castaneum*: A possible target to control crop destruction caused by the red flour beetle. B. O'Flynn, D.J. Merkler

59. Metabolomic analysis and variation in phytochemical composition among North American cranberry cultivars. L. Xue, A. Milstead, K. Colson, C.C. Neto

60. Comparison of dissipation ratio between metconazole and myclobutanil in dropwort. S. Hong, J. Hwang, S. Lee, S. Kwak, M. Kang, J. Kang, J. Ryu, K. Kyung, J. Kim

61. Characterisation of bioactive grape and wine metabolites through a combined organic, analytical and computational approach. S. Tan, D. Barker, B. Fedrizzi

62. Withdrawn

63. Assessing the stability of lutein in model food systems supplemented with spinach powder. K. Kensil, K.R. Conca

64. Comparative metabolite profiling of *Solanum lycopersicum* leaves exposed to herbivore damage and the phytohormone jasmonic acid. M. Cohen, J. Smith, A.E. Witter

65. Utilization of crop residue processing factor compilations for human safety assessment residue data strategy development. C.K. Kingston

66. Further characterization of IBU calculators using additional OG worts. N.O. Flynn, J. Welbaum

67. Formation of savory flavors through reaction flavor system in the enzymatic hydrolysate of soy sauce residue and defatted soybean. Y. Cha, W. Wang
68. Laboratory kitchen sink: Determining appropriate internal standards for HS-SPME-GC-MS volatile profiling in plant mapping populations using post hoc evaluations. E.A. Burzynski, B.I. Reisch, G.L. Sacks
69. Production of seasoning flavors in the hydrolysate of soy sauce residue using reaction flavor technology. Y. Cha, W. Wang
70. Atmospheric cold plasma causing chemical and physical changes on ginseng surface increasing yield of ginsenosides extraction. R. Wang, Y. Ting
71. Cold Plasma pretreatment modified the chemical properties of grape surface: Enhancing the drying rate and final raisin quality. C. Huang, J. Wu, Y. Ting
72. Protein-based food models developed to assess formulations for losses in amino acids due to protein crosslinking during storage. K.R. Conca, K. Kensil
73. Increasing the solubility of meat and bone meal protein for potential flocculant applications. R.M. Marsico
74. Mechanistic studies of protein tyrosine kinase activation by heavy metal ions. Y. Ahmadibeni, S. Guha
75. Separation of iron from egg yolk by aqueous extraction of phosvitin or ethylenediaminetetraacetic acid (EDTA) treatment. J. Ren, J. Wu
76. Risk assessment of food additives and packaging. H.E. Dover, M.P. Holsapple, S.E. Selke
77. Analysis of flame retardants: A survey of food contact materials. R. Paseiro Cerrato, L.K. Ackerman, L. Dejager, T. Begley
78. Effects of high pressure processing on chemical migration in PET. Y.S. Song, J.L. Koontz, Y. Zhou, K. Pillai, J. Ding
79. Fatty acids contents and expanded uncertainty of infant formulas by gas chromatography. D. Seo, J. Hwang, S. Kim, B. Kim, J. Lee
80. Contents of macro- and micro-minerals in infant formulas by ICP-OES and ICP-MS. D. Seo, J. Hwang, S. Kim, J. Park, H. Lee, B. Kim, J. Lee
81. LC-MS analysis of antioxidant polymer additives exposed to low dose gamma irradiation. M.D. Celiz, K.M. Morehouse, L. Dejager, T. Begley
82. Acidity adjustments, tartrate formation, and oxidative stability of wines treated with cation exchange resins. V. Laurie, F. Ponce, C. Adiazola, Y. Mirabal-Gallardo
83. Preparation of amorphous starch using ultra high pressure and ethanol process and observation of internal structure. J. Lee, B. Kim, M. Baik
84. Converting used tea leaf into active antimicrobial films using electrospinning method. R. Peng, Y. Ting
85. Investigation of antibiotic susceptibility, class 1 integron and biofilm formation ability on *Salmonella* spp., *Escherichia coli* and *Staphylococcus aureus* from various foods in South China. J. Su, W. Wang, H. Hu
86. Use of chemical ontology in the evaluation of food ingredients and packaging at the FDA. D.M. Schmit, T. Page
87. US FDA's food additive knowledgebase and cheminformatics platform: Chemical evaluation and risk estimation system. P. Volarath, L. Holt, T. Deng, M. Garg, D. Mehta, K. Arvidson
88. Using sniff olfactometry to measure olfactory latency. C. Albiets, T.E. Acree
89. Using sniff olfactometry to study Sauvignon Blanc odorant interactions. X. Zheng, C. Maxe, T.E. Acree
90. Eriocitrin attenuates high-fat diet induced disturbances in C57BL/6J mice. P.S. Ferreira, M. Nery, J.A. Manthey, T.B. Cesar

MONDAY MORNING August 21 Convention Center Room 149A Section A

From Fermentation to Fume Hood: The Chemistry of Wine Authentication, Omics Approach & Sulfur-Compounds

financially supported by E&J Gallo, Constellation Brands, Agilent Technologies

G. L. Sacks, Organizer D. L. Capone, Organizer, Presiding

8:30 91. Metabolomics tools for the analysis of non-volatile polyphenols in grapes, wine and humans. M. Herderich, V. Hysenaj, J. Fernandes, C. Stockley, N. Lloyd

8:55 92. Chemo-diversity in monoterpene enantiomers from Riesling wines from different regions and wine styles. M. Song, M.C. Qian, C. Fuentes, E. Tomasino

9:20 93. Regional chemical characteristics of Sangiovese wines from Italy and California. V. Canuti, S. Frost, L.A. Lerno, J. Zweigenbaum, S.E. Ebeler

9:45 94. Global lipidomics profiling of grapes identifies lipidomics signatures discriminating between grape genotypes. V. Shulaev, K. Zaman, M. Ghaste, G. Chitarrini, S. Grando, M. Stefanini, U. Vrhovsek, F. Mattivi

10:10 Intermission

10:30 95. Varietal thiols origins in wine: A review on their liberation mechanisms from the precursors present in grapes and musts. R. Schneider

10:55 96. Rethinking re-stinking: A critical evaluation of hypotheses for formation of sulfurous off aromas during wine storage. G.L. Sacks, G. Kreitman, R. Elias, D.W. Jeffery

11:20 97. Potential strategies for preventing copper mediated reductive aroma in post-bottle wines. L. Vernarelli, G. Kreitman, R. Elias

Food Additives & Packaging Global Challenges to Regulating Food Packaging

Convention Center Room 149B Section B

L. T. Cureton, D. L. Doell, R. Shah, Organizers V. Komolprasert, Organizer, Presiding L. Cureton, Presiding

8:00 Introductory Remarks

8:05 98. Comparison of the major regulatory systems for food contact materials. D. Hill

8:30 99. Unpacking food packaging controversies. E. Greenberg

8:55 100. Are the color additives in your inks or coatings in compliance with food contact regulations?. N.H. Mady

9:20 101. Use of recycled plastics for food packaging in Thailand. C. Pattanakul

9:45 102. Safer food packaging: What we have learned and where we have come. M. Cheeseman
10:10 Intermission
10:25 103. Using analytical tools to assess compliance with the purity requirements in global food-contact regulations. P.N. Coneski
10:50 104. Using national biomonitoring data to understand the contribution of dietary sources to human exposures of phthalates, bisphenol A, and polyfluoroalkyl substances. A.R. Zota
11:15 105. Estimation of partition coefficients between polyolefins and water, and food simulants using the vapor pressure index method. L.L. Baner, O. Piringer
11:35 106. Performance evaluation for the analytical methods of metals in food contact materials. Y. Abe, M. Mutsuga, K. Sato
11:55 Concluding Remarks

Food Safety & Labeling: Food & Flavor Regulations, Progress & Challenges in the Pursuit to Serve the Consumer Food & Flavor Regulations, Accurate Labeling cosponsored by PROF

O. Burlison, M. Guentert, L. Jackson, Organizers D. K. Weerasinghe, Organizer, Presiding C. Frey, Presiding
Convention Center Room 144C Section C
8:30 Introductory Remarks
8:45 107. New nutrition facts panel. K. Wingfield
9:15 108. Total and individual sugar content of top contributors of commercially processed foods with added sugars in the U.S. Y. Li, J. Ahuja
9:45 109. FDA's added sugars labeling regulation – the not so sweet treat. B. Silverglade
10:15 Intermission
10:30 110. P-GMO and organic food effects on animal metabolic health. F.M. Assadi-Porter, E. Selen-Alpergin, W. Porter
11:00 111. How the Food Chemicals Codex evolves to ensure the safety of the food supply. C. Frey
11:30 112. What's a natural and clean label?. D.K. Weerasinghe

Impact of Carbonyl & Glycative Stress on Diabetic & Aging Related Diseases cosponsored by BIOL

Convention Center Room 144B Section D
C. Ho, S. Sang, Organizers L. Lv, Presiding
8:30 Introductory Remarks
8:35 113. Reactive carbonyl species from the oxidation of omega-3 and omega-6 fatty acids and method for their intervention. C. Ho, Y. Wang
9:00 114. Phenolic-type reactive carbonyl scavengers as inhibitors against the formation of advanced glycation end products (AGEs) and AGEs-induced endothelial cell apoptosis and inflammation. M. Wang, Q. Zhou
9:25 115. Essential structural requirements and additive effects for dietary polyphenols to scavenge methylglyoxal. Y. Zhu, Q. Huang, P. Wang, L. Lv, S. Sang
9:50 116. Influence of quercetin and its methylglyoxal adducts on the formation of α -dicarbonyl compounds in lysine and glucose model system. L. Lv

10:15 Intermission
10:30 117. Withdrawn
10:55 118. Studies on inhibition mechanism of advanced glycation end products by resveratrol in intermediate moisture protein-Sugar Foods. Z. Sheng, B. Ai, L. Zheng, X. Zheng, F. Tang, Z. Xu
11:20 119. Trapping of acrolein by dietary flavonoids. Q. Huang, Y. Zhu, P. Wang, S. Zhang, L. Lv, S. Sang
11:45 Concluding Remarks

Green Polymer Chemistry: Biobased Materials & Biocatalysis Chemical Catalytic Routes to Biobased Materials sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

MONDAY AFTERNOON August 21 Convention Center Room 149A Section A

General Papers

B. D. Guthrie, Organizer H. Ma, Presiding
1:30 Introductory Remarks
1:35 120. High yield/quality of net proteins, lipids, and antioxidants extracted through fractionation/one step chemical method. T. Chavez-Gil
1:55 121. Withdrawn
2:15 122. Concurrent production of plant protein- and carbohydrate-enriched fractions by a dry triboelectrification-based approach. S. Tabatabaei, A.R. Rajabzadeh, R.L. Legge
2:35 123. Development of a green procedure with ultrasound improved supercritical CO₂ to produce extracts enriched in rosmarinic acid from *Perilla frutescens* and determination of its fictitious solubility. M. Wei, P. Lin, D. Wei, J. Chen, K. Chen, Y. Yang
2:55 Intermission
3:15 124. Extracellular substances from biofilms produced in pure and mixed culture under conditions mimetic food processing. L. Deschenes, N. Guertin, T. Ells, T. Savard, M. Elliot, C. Lapointe, D. Chabot
3:35 125. Effect of pressure and temperature on the stability of ascorbic acid in citrus fruit juices. M.C. Azih
3:55 126. Studies on the oxidative stability of cashew nut (*Anacardium occidentale*) oil. M.C. Azih
4:15 127. Comparison of analytical methods for protein level determination in foods. M.C. Azih
4:35 128. Mathematical model of methanethiol generation and degradation in anaerobic chemostats. D. Zhang, Z. Wang

Food Additives & Packaging Emerging Trends in Food Packaging

Convention Center Room 149B Section B
L. T. Cureton, D. L. Doell, R. Shah, Organizers V. Komolprasert, Organizer, Presiding L. Cureton, Presiding
1:00 Introductory Remarks
1:05 129. Overview of beverage packaging innovations enabled by effective regulatory clearances. S.L. Mosley, J.C. Huang

1:30 130. Developing active surfaces through the implementation of nanotechnology. M. Rubino
1:55 131. Active packaging using regenerated cellulose and hydroxypropyl amylopectin for fresh food products. V. Finkenstadt, J. Xu
2:20 132. Halloysite nanotube/polyethylene nanocomposites as multifunctional active food packaging materials. C. Tas, B. Alkan, M. Baysal, F.C. Cebeci, S. Unal, Y.Z. Menciloglu, H. Unal
2:45 Intermission
3:00 133. Direct chemical characterization of retail food packaging & prints. L.K. Ackerman, K. Bentayeb, M. Lago
3:25 134. Oxygen and moisture barrier from polyelectrolyte-based nanocoatings on polymeric packaging film. J.C. Grunlan
3:50 135. High-resolution mass spectrometry as a sophisticated technique for screening non-intentionally added substances (NIAS) eluted from polyethylene terephthalate bottle. A. Yamamoto, T. Murakami, E. Kishi, M. Shizuma, A. Ozaki
4:15 136. Reactive extrusion of polylactic acid/cellulose nanocomposite films: Crystallization and thermo-mechanical studies. V. Katiyar
4:35 137. Influence of ligand chemistry on antimicrobial synergy of solid support bound metal chelators against acidophilic thermophilic bacteria. J. Herskovitz, R.W. Worobo, J.M. Goddard
4:55 Concluding Remarks

Food Safety & Labeling: Food & Flavor Regulations, Progress & Challenges in the Pursuit to Serve the Consumer Food & Flavor Regulations, Accurate Labeling cosponsored by PROF

Convention Center Room 144C Section C
O. Bursleson, L. Jackson, D. K. Weerasinghe, Organizers
M. Guentert, Organizer, Presiding C. Harman, Presiding

1:00 Introductory Remarks
1:10 138. Flavors with modifying properties (FMP). M.A. Guentert
1:40 139. FEMA Expert Panel safety evaluation of flavorings with modifying properties-focus on sensory testing approaches. C. Harman
2:10 140. US regulatory authority to use flavor ingredients - flavor and food labeling implications. J. Drake
2:40 Intermission
2:55 141. Recent advances in the authenticity control of natural flavor ingredients. M. Stuert, J. Kiefl, T. Geißler, K. Geißler, J.P. Ley, G.E. Krammer
3:25 142. Identifying the mislabeling of natural food products with carbon-14 testing. F. Goren, J. Garside

Impact of Carbonyl & Glycative Stress on Diabetic & Aging Related Diseases cosponsored by BIOL
Convention Center Room 144B Section D
C. Ho, L. Lv, Organizers S. Sang, Presiding
1:30 Introductory Remarks

1:35 143. Dietary genistein ameliorates high-fat plus methylglyoxal-induced advanced glycation end products formation in mice. Y. Zhao, P. Wang, S. Sang
2:00 144. Analysis of glyoxal-induced DNA and protein damage in blood of diabetic patients by mass spectrometry. H.C. Chen
2:25 145. Transketolase suppresses glycolaldehyde/glyoxal mediated formation of advanced glycation endproducts. M.A. Glomb, A. Klaus, C. Henning
2:50 146. Targeted profiling: Quantitative analysis of multiple reactive carbonyl species in biological samples. P. Wang, S. Sang
3:15 Intermission
3:30 147. Inhibitory effect of black tea theaflavins on advanced glycation end product formation in the fructose-induced protein system. Y. Wang, T. Hsiao, S. Li, M. Pan, C. Ho, C.Y. Lo
3:55 148. Tetrahydroisoquinoline derivatives by reaction of dopamine with methylglyoxal: Potential neurotoxins associated with Parkinson's disease. W. Wu, Y. Zhao, C. Ho, S. Sang
4:20 149. Neuroprotective effects of anthocyanin-enriched extracts of common edible berries are mediated by their antioxidant and carbonyl trapping capacities. H. Ma, S. Johnson, N. DaSilva, W. Liu, S.M. Meschwitz, J. Dain, N.P. Seeram
4:45 Concluding Remarks

Biological Targets of Botanical Supplements

sponsored by TOXI, cosponsored by AGFD location: Marriott Marquis Georgetown University Room

Green Polymer Chemistry: Biobased Materials & Biocatalysis New Reaction Strategies & Materials

sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

Undergraduate Research Posters Agricultural & Food Chemistry sponsored by CHED, cosponsored by AGFD, SOCED location: Convention Center Hall D

MONDAY EVENING August 21 8:00 - 10:00 PM

Convention Center Halls D/E Section A

Sci-Mix

B. D. Guthrie, Organizer
49, 55, 56, 57, 58, 59, 66, 68, 73, 78, 86, 87, 88, 104, 118, 182, 204, 208, 231, 236, 251, 273, 274, 275, 276 - see previous and subsequent listings

TUESDAY MORNING August 22 Convention Center Room 144B Section A

Journal of Agricultural & Food Chemistry Best Paper Award & Young Scientist Award Symposium

cosponsored by AGRO, CINF, PROF

K. D. Deibler, Organizer, Presiding

8:00 Introductory Remarks

8:10 150. Carbonyl-trapping ability of phenolic compounds: An additional protective role of phenolic

compounds against the broadcasting of the lipid oxidative damage in foods. R. Zamora, F.J. Hidalgo
8:50 Intermission
9:05 151. Developing novel chemical imaging approaches in agriculture using mass spectrometry. S. Annangudi, J.R. Gilbert, S. Wilson
9:35 152. Controlling physical properties of β -lactoglobulin microgels to enhance emulsion stabilization. O.G. Jones
10:05 153. Desired flavor-active and undesired food-borne toxicants in our food: How food chemists can help to produce healthier foods with good sensory attributes. M. Granvogl
10:35 Intermission
10:50 154. Dietary intake of oxidized lipids exacerbates colon inflammation and colon cancer through activation of Toll-like receptor 4 (TLR4). G. Zhang
11:20 155. Construction of the next generation platforms to monitor food contamination and food fraud. X. Lu

Advancing Analytical Methods in Food Forensics & Authentication

cosponsored by ANYL
Convention Center Room 149A Section B
L. Jackson, A. E. Mitchell, L. L. Yu, Organizers, Presiding
8:30 Introductory Remarks
8:35 156. Frontiers in food forensics and authentication. A.E. Mitchell
9:05 157. Food defense: Defining food system disruptions. A. Kircher
9:35 158. Spectroscopy based methods for detection of food adulteration. X. Lu, B. Rasco
10:05 159. Non-targeted methods for characterization of foods and botanicals. J. Harnly
10:35 Intermission
10:50 160. Standardization of non-targeted methods for food adulteration prevention. Z. Xie, J. Moore
11:20 161. Fingerprinting and metabolomics applications in food/botanical authentication and quality evaluation. J. Sun, P. Chen
11:50 162. HPLC fingerprinting for authentication of Berberis species. N. Kaushik, D. Bharadwaj

Food Safety & Labeling: Food & Flavor Regulations, Progress & Challenges in the Pursuit to Serve the Consumer Food Safety, Food Processing, Validation of Labeling

cosponsored by PROF
Convention Center Room 144C Section C
O. Bureson, M. Guentert, D. K. Weerasinghe, Organizers L. Jackson, Organizer, Presiding J. Canavan, Presiding
8:30 Introductory Remarks
8:40 163. Ohmic heating and its advantages for clean labeling. S. Sastry, T. Pyatkovskyy, C. Samaranayake
9:10 164. Limited survey of dark chocolate and bakery products for undeclared milk. B. Bedford, Y. Yu, X. Wang, L. Jackson
9:40 165. Applications of isothermal calorimetry for food safety. L. Wadsö
10:10 Intermission

10:25 166. FSMA and the current good manufacturing practice, hazard analysis, and risk-based preventive controls for human food rule. L. Hsu
10:55 167. FSIS food regulatory and labeling overview. J. Canavan

Advances in Flavor Analysis

cosponsored by ANYL
Convention Center Room 149B Section D
M. C. Qian, C. T. Shao, Organizers, Presiding
8:30 Introductory Remarks
8:35 168. From chemosensory codes to unified flavor quantitation. T. Hofmann, A. Dunkel
8:55 169. Using data tools and data visualization to interpret multifactorial flavour datasets. A.J. Taylor, D.S. Mottram
9:15 170. Efficient aroma analysis through non-targeted pre-screening followed by detailed analysis using on-line MS and GC-El/APCI-MS. J. Hatakeyama, A.J. Taylor
9:35 171. Rapid, sensitive, and spatially resolved measurements of trace volatiles using sorbent meshes and high-resolution ambient ionization mass spectrometry. G.L. Sacks, J.A. Jastrzembski, M.Y. Bee
9:55 172. Targeting taste-active peptides in foods by new approaches in peptidome analysis. K. Sebald, A. Dunkel, T. Hofmann
10:15 Intermission
10:30 173. Streamlined approach for the determination of aroma components of aged liquors. W. Zhu, K.R. Cadwallader
10:50 174. Determination of chlorophenols in starch and starch based snacks by solid phase microextraction with in situ derivatization and gas chromatography coupled to tandem mass spectrometry. C.T. Shao, V.A. Elder
11:10 175. Sensomics approach applied to flavor and taste studies in yellow tamarillo (*Solanum betaceum*) fruit. J. García-Chacón, L. Prieto, C. Osorio Roa
11:30 176. Analysis of organic volatile aroma compounds in douzhi and tentative characterization of the key odorants by odor activity value. Y. Liu, J. Huang, Y. Zhang, Z. Miao
11:50 Concluding Remarks

Sterling Hendricks Memorial Lecture Award

sponsored by AGRO, cosponsored by AGFD location: Renaissance Washington Mt Vernon Square B Room (11:45 AM - 12:55 PM)

Green Polymer Chemistry: Biobased Materials & Biocatalysis Green Biocatalytic Transformations

sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

TUESDAY AFTERNOON August 22 Convention Center Room 144B Section A

AGFD Award Symposium in honor of Dr. Ronald E. Wrolstad

N. P. Seeram, Organizer, Presiding
1:30 Introductory Remarks
1:35 177. Colorful world of anthocyanins: Learning from nature. M. Giusti

2:10 178. pH-Differential method applied to the color assessment of anthocyanin-rich extracts and microencapsulates from *Pouroma cecropiifolia* Mart. fruit. J. Barrios, A. Morales, C. Osorio Roa
2:45 179. Authentication of food ingredients by vibrational spectroscopy: Moving out of the lab. L. Rodriguez-Saona
3:20 Intermission
3:35 180. Understanding anthocyanin: Researcher and educator Dr. Ron Wrolstad. J. Lee
4:10 181. Rewards of anthocyanin research. R. Wrolstad
4:45 Concluding Remarks

Advancing Analytical Methods in Food Forensics & Authentication

cosponsored by ANYL
Convention Center Room 149A Section B
L. Jackson, A. E. Mitchell, L. L. Yu, Organizers, Presiding
1:00 182. Manuka honey authentication via fingerprinting and statistics. N. Beitlich, K. Speer
1:30 183. Novel approaches in high-resolution UHPLC-MS based metabolomics for analysis of food authenticity. A. Dunkel, T. Hofmann
2:00 184. Non-targeted fingerprints for detecting milk quality and safety. W. Lu, B. Gao, L. Du, L.L. Yu
2:30 185. Application of a novel FT-NIR and PLS1 methodology to the rapid prediction of authenticity of extra virgin olive oil products. M.M. Mossoba
3:00 Intermission
3:15 186. SPME-GC-ToF-MS techniques applied to identifying potential product taints. M.J. Morello
3:45 187. Food forensics investigation combining microscopy and spectroscopy. J. Dong, V. St.Jeor, A. Lape, T. Lindgren
4:15 188. Selected food forensic techniques to evaluate food authenticity and adulteration. S.D. Bhandari, M. Germani, Z. Xie

Food Safety & Labeling: Food & Flavor Regulations, Progress & Challenges in the Pursuit to Serve the Consumer Food Safety, Food Processing, Validation of Labeling

cosponsored by PROF
Convention Center Room 144C Section C
M. Guentert, L. Jackson, D. K. Weerasinghe, Organizers
O. Burlison, Organizer, Presiding I. Labuda, Presiding
1:00 Introductory Remarks
1:10 189. Food safety interventions research at the eastern regional research center: Innovative sanitizers, natural antimicrobials and nonthermal processing technologies. J.B. Gurtler, B.A. Niemira
1:40 190. Pesticide detection in organic and non-organic foods and flavors. I. Labuda, X. Zhang, L. Heller
2:10 191. Mitigation of food fraud using the USP Food Fraud Mitigation Guidance and Food Fraud Database 2.0. J. Balson
2:40 Intermission
2:55 192. Reasons for proper labelling to promote the safety of thermally processed fluid products. J. Miles
3:25 193. Traceability and authenticity in food products: Contribution of NMR for intramolecular isotope

measurements. G. Remaud, V. Silvestre, R.J. Robins, S. Akoka
3:55 Concluding Remarks

Advances in Flavor Analysis

cosponsored by ANYL
Convention Center Room 149B Section D
M. C. Qian, C. T. Shao, Organizers, Presiding
1:30 Introductory Remarks
1:35 194. Application of gas chromatography: Vacuum ultraviolet spectroscopy to flavor and fragrance analysis. K. Schug, I.C. Santos, C. Qiu, J. Schenk, M. Bernart, J. Smuts
1:55 195. Two-dimensional GC-MS/olfactometry to study chiral terpene alcohol aroma contribution and stability. M.C. Qian, F. He, Y.L. Qian
2:15 196. Quantitation of potent polyfunctional thiols and their enantiomers in wine using HPLC-MS/MS after derivatization. D.L. Capone, L. Chen, L. Francis, D.W. Jeffery
2:35 197. Characterization of volatile sulfur compounds in different flavor types of Chinese liquor by gas chromatography-pulsed flame photometric detection. S. Chen, S. Sha, Y. Xu
2:55 Intermission
3:10 198. Applying fuzzy-set logic analysis to relationships between flavor chemistry and sensory perception: A case of red fruit aromas in wine. E. Tomasino, A. Tomasino
3:30 199. Elucidation of off-flavors in canola and olive oils. M. Granvogl, K. Matheis, P.H. Schieberle, A. Neugebauer
3:50 200. Novel flavor ingredient discovery by cutting edge instrumental analysis and sensory evaluation. X. Du
4:10 201. Characterization of the key aroma compounds in Chinese high-grade green tea beverage (*Camellia Sinensis*) and studies on changes in tea leaves induced by the traditional manufacturing. M. Flaig, P.H. Schieberle
4:30 202. Optimization of reaction flavor for sweet-brown top-notes. L. Paravisini, D.G. Peterson
4:50 Concluding Remarks

Green Polymer Chemistry: Biobased Materials & Biocatalysis Polysaccharide-Based Materials

sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8
TUESDAY EVENING August 22 6:00 – 8:00 PM
Green Polymer Chemistry: Biobased Materials & Biocatalysis sponsored by POLY, cosponsored by AGFD, CELL, PMSE location Convention Center Hall E

WEDNESDAY MORNING August 23 Convention Center Room 144B Section A

Food-Borne Toxicants: Formation, Analysis & Toxicology

M. Granvogl, S. MacMahon, Organizers, Presiding
8:30 Introductory Remarks

8:35 203. Mitigation of the formation of acrylamide in foods – what has been achieved?. D.S. Mottram, N. Halford, S.J. Powers, A. Curtis
9:05 204. Acrylamide levels in chips made from vegetables other than potatoes. S. Elmore, F. Xu, M. Oruna-Concha
9:35 205. Reducing the acrylamide-forming potential of wheat, rye and potato: Variety selection, genetic improvement and crop management. N. Halford, S. Raffan, T. Curtis
10:05 Intermission
10:25 206. Formation of acrylamide in thermally processed foods and its reactions during in vitro digestion. V. Gökmen, A. Hamzalioglu
10:55 207. Analysis and occurrence of MCPD and glycidyl esters in infant formula and other complex food matrices. J. Leigh, S. MacMahon
11:25 Concluding Remarks

Advancing Analytical Methods in Food Forensics & Authentication cosponsored by ANYL

Convention Center Room 144C Section B

L. Jackson, Organizer A. E. Mitchell, L. L. Yu, Organizers, Presiding

8:30 208. Tracing quinone reactions in wine using C-13 labeling and QToF MS. L. Ma, A.L. Waterhouse, C. Bueschl, R. Schuhmacher

9:00 209. Elemental profiling to establish authenticity of grapes and wines. C. Tanabe, J. Godshaw, R. Boulton, S.E. Ebeler, H. Hopfer, J. Nelson

9:30 210. No standards? No problem! A standard-less isotope dilution speciation method to quantify adulteration of green table olives with copper compounds. P.J. Gray, T. Todorov, B. Petigara Harp, P. Delmonte, P.F. Scholl

10:00 Intermission

10:15 211. Forensic DNA-based species identification tools for hazards assessment, investigation of seafood-related illness, and detection of seafood fraud. J. Deeds

10:45 212. Identification of strain specific bacterial proteins and protein toxins by top-down and bottom-up mass spectrometry. M. McFarland, S. Chen, D. Andrzejewski, S. Tallent, T.R. Croley

11:15 213. Effects of adulteration technique on the NIR detection of melamine in milk powder. P.F. Scholl, M. Bergana, B.J. Yakes, Z. Xie, S. Zbylut, G. Downey, M.M. Mossoba, J.E. Jablonski, S. Karunathilaka, L.K. Ackerman, R.L. Magaletta, S. Holroyd, M. Buehler, J. Qin, W. Hurst, J. LaPointe, D. Roberts, C. Zrybko, A. Mackey, J. Holton, G. Israelson, A. Payne, B. Gao, M. Kim, K. Chao, J. Moore

11:15 213. Effects of adulteration technique on the NIR detection of melamine in milk powder. P.F. Scholl, M. Bergana, B.J. Yakes, Z. Xie, S. Zbylut, G. Downey, M.M. Mossoba, J.E. Jablonski, S. Karunathilaka, L.K. Ackerman, R.L. Magaletta, S. Holroyd, M. Buehler, J. Qin, W. Hurst, J. LaPointe, D. Roberts, C. Zrybko, A. Mackey, J. Holton, G. Israelson, A. Payne, B. Gao, M. Kim, K. Chao, J. Moore

Natural Alternatives to Artificial Food Additives

Convention Center Room 149A Section C

K. R. Cadwallader, F. Shahidi, Organizers, Presiding

8:30 214. Flavors and flavorings in a clean label environment. K.R. Cadwallader

9:00 215. Clean label antioxidants in food application. F. Shahidi

9:30 216. Converting phyto-compounds to multifunctional food ingredients. R.T. Toledo

10:00 Intermission

10:15 217. Chemistry and challenges in using natural sourced colors exempt from FDA certification. M. Goldschmidt

10:45 218. Carotenoids and natural and functional food colorants. K. Miyashita

11:15 219. Stabilization of anthocyanins with food pigment potential and their insulin sensitizing effect in adipocytes under inflammatory status. E. Demejia, D. Luna-Vital

Green Polymer Chemistry: Biobased Materials & Biocatalysis Biobased Thermosetting Resins

sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

WEDNESDAY AFTERNOON August 23 Convention Center Room 144B Section A

Food-Borne Toxicants: Formation, Analysis & Toxicology

M. Granvogl, S. MacMahon, Organizers, Presiding

1:30 Introductory Remarks

1:35 220. Lipid hydroperoxides and the either promoting or inhibitory role of phenolic compounds in 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP) formation. F.J. Hidalgo, R. Zamora

2:05 221. Simultaneous formation of undesired food-borne toxicants and desired aroma-active compounds. M. Granvogl

2:35 Intermission

2:55 222. Alleviation chronic cadmium stress toxicity in albino rats using some domestic plants. E. Shaker, S. Mnaa

3:25 223. Analysis of arsenolipids in seafood. S. Conklin, M.M. Wolle

3:55 Concluding Remarks

Advancing Analytical Methods in Food Forensics & Authentication cosponsored by ANYL

Convention Center Room 144C Section B

L. Jackson, Organizer A. E. Mitchell, L. L. Yu, Organizers, Presiding

1:30 224. Detecting and distinguishing among covalent and non-covalent differences in proteins: Shiga toxins and prions. C.J. Silva, M.L. Erickson-Beltran

2:00 225. Use of a novel xMAP food allergen detection assay to detect food allergens. E.A. Garber

2:30 226. Presence of undeclared allergens in food: A multi-allergen approach by mass spectrometry. C.H. Parker

3:00 Intermission

3:15 227. Development and validation of a hepatotoxicity prediction model using cultured clone-9 cells. L. Jie, W. Lu, X. Sun, C. Zou, L.L. Yu

3:45 228. Novel tool for in vitro toxicity screening of foods using biosensor-expressing human kidney cells. M. Mossoba, S. Vohra, E. Bigley III, Z. Keltner, P. Wiesenfeld

4:15 229. Persistent luminescence nanophosphor-based optical imaging for determination of aflatoxin in cells via time-resolved fluorescence resonance energy transfer. J. Liu, S. Wang
4:45 Concluding Remarks

Natural Alternatives to Artificial Food Additives

Convention Center Room 149A Section C
K. R. Cadwallader, F. Shahidi, Organizers, Presiding
1:00 230. Antimicrobial activity of sophorolipids against foodborne pathogenic bacteria. X. Fan, X. Zhang, R. Ashby, D. Solaiman
1:30 231. 3,6-Anhydro-L-galactose as a new natural anticariogenic sugar. E. Yun, A. Lee, K. Kim
2:00 Intermission
2:15 232. Formation and mass spectrometric identification of acetaldehyde-catalyzed condensation of red radish (*Raphanus sativus*) anthocyanins and catechin. N.B. Stebbins, L. Howard, R. Prior, C. Brownmiller
2:45 233. Oxidative stability of fish oil-in-water emulsions stabilized by protein-polysaccharide complexes. M. Krempel, K. Griffin, H. Khouryieh

Green Polymer Chemistry: Biobased Materials & Biocatalysis Plant Oils & Ferulate-Based Materials

sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

THURSDAY MORNING August 24 Convention Center Room 144B Section A

Food-Borne Toxicants: Formation, Analysis & Toxicology

M. Granvogl, S. MacMahon, Organizers, Presiding
8:30 Introductory Remarks
8:35 234. Fit-for-Purpose methods for mycotoxin analysis using LC-MS. K. Zhang
9:05 235. Thermal reactions and the formation of degradation products of T2 and HT2 toxin during processing of oats. H. Schmidt, M. Schulz, S. Becker, B. Cramer, H. Humpf
9:35 Intermission
9:55 236. Development of a single kernel assay for aflatoxin contamination in maize. D.L. Sparks, A.E. Brown, C.X. Reid, X. Shan
10:25 237. Identification and determination of potential migrants in food contact materials. R. Paseiro Cerrato, L.K. Ackerman, L. Dejager, T. Begley
10:55 Concluding Remarks

General Papers

Convention Center Room 144C Section B
B. D. Guthrie, Organizer H. Ma, Presiding
8:30 Introductory Remarks
8:35 238. Cabbage inhibits nitrate reduction in other vegetables. J. Huang
8:55 239. Cholesterol-lowering activity of short-chain fatty acids in hypercholesterolemia hamsters. Y. Zhao, Z. Chen

9:15 240. Cholesterol analogs with a branched side chain but not a straight chain possess a cholesterol-lowering activity. H. Zhu, Z. Chen
9:35 241. Flame retardant 2,2',4,4'-Tetrabromodiphenyl ether enhances the expression of corticotropin-releasing hormone in the placental cell model JEG-3. Y. Tan
9:55 242. Resveratrol and piceatannol inhibit alpha-glucosidase in mice. A.J. Zhang, A.M. Rimando, C.S. Mizuno, S. Mathews
10:15 Intermission
10:35 243. Oral delivery of phytochemicals by edible nanoencapsulation vehicles. J. Xiao
10:55 244. Identification of Interleukin 8-reducing lead compounds based on SAR studies on food-derived dihydrochalcones and related compounds in human gingival fibroblasts. K. Schueller, J. Hans, S. Pfeiffer, J. Walker, J.P. Ley, V. Somoza
11:15 245. Identification of amino acid structural determinants for activating mechanisms of gastric acid secretion. V. Stoeger, K. Liszt, B. Lieder, M. Zopun, M. Wendelin, J. Hans, J.P. Ley, G.E. Krammer, V. Somoza
11:35 246. Structural determinants of fatty acid uptake inhibition in differentiated Caco-2 cells. B. Lieder, J. Hans, K. Geissler, F. Hentschel, J.P. Ley
11:55 247. Withdrawn

Nanoscale Sensing in Foods & Other Complex Media

cosponsored by AGRO, ANYL, COLL, ENVR, INOR
Convention Center Room 149A Section C
T. V. Duncan, B. Park, Y. Wang, Organizers R. G. Weiner, Organizer, Presiding
8:30 Introductory Remarks
8:35 248. In Situ and real-time monitoring of pesticide translocation and persistence in tomato plants by surface enhanced Raman spectroscopy. T. Yang, L. He
9:00 249. Surface plasmon resonance imaging for label-free detection of foodborne pathogens and toxins. J. Chen, B. Park
9:25 250. Improving the robustness of plasmonic nanoparticles for sensing in complex media. A.J. Haes
9:50 251. Nanomaterials-based biosensor system for rapid detection of Salmonella Typhimurium in poultry supply chains. Y. Li, J. Lin, J. Wang, M. Liao
10:15 Intermission
10:30 252. Applications of near infrared fluorescent single walled carbon nanotube sensors to food and agriculture security. M. Strano
10:55 253. Active botulinum neurotoxin serotypes A and B detection and differentiation by FRET-based sensor. Y. Wang, H.C. Fry, I. Medintz, G.E. Skinner, K.M. Schill, T.V. Duncan
11:20 254. Bionanotechnology: Sensing from simple solutions to complex outcomes for food safety. S. Neethirajan, X. Weng, S. Ahmed, J. Jang

Green Polymer Chemistry: Biobased Materials & Biocatalysis Therapeutics & Opto-Electronics

sponsored by POLY, Cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

THURSDAY AFTERNOON August 24 Convention Center Room 144B Section A

Analysis of Nutrients & Bioactive Compounds in Foods & Dietary Supplements: Methodologies & Challenges for Databases

S. Savarala, Organizer P. Pehrsson, X. Wu, Organizers, Presiding

1:30 Introductory Remarks

1:35 255. Analytical methods and data for the USDA food composition databases, and process for evaluating laboratory data quality. P. Pehrsson

1:55 256. New developments in the analyses of bioactive compounds in foods for developing special interest databases. X. Wu, D. Haytowitz, P. Pehrsson

2:15 257. Challenges in research on phytochemicals: Avoiding some potential pitfalls. B.C. Sorkin, D.C. Hopp

2:35 Intermission
2:50 258. Analytically based estimates of ingredient content in dietary supplements: Dietary Supplement Ingredient Database, release 4. K. Andrews

3:10 259. Botanical initiative for the Dietary Supplement Ingredient Database (DSID): Interlaboratory trial to assess methods for catechins in green tea dietary supplements. S. Savarala

3:30 260. NIST Tools for analysis of foods & dietary supplements: Ensuring quality in nutrient databases. M.M. Phillips, C. Rimmer, L. Wood

General Papers

Convention Center Room 144C Section B
B. D. Guthrie, Organizer H. Ma, Presiding

1:30 Introductory Remarks

1:35 261. Study starch content and a variety of physical characteristics of rice (*Oryza sativa* L.). K.A. Omer

1:55 262. Novel swollenin from *Talaromyces leycettanus* JCM12802 with broad substrate specificity and synergistic action with a cellulase on avicel degradation. Y. Wang, F. Zheng, T. Tu, H. Luo

2:15 263. Isomelezitose production from sucrose via glucansucrases. G.L. Cote, C.D. Skory

2:35 264. Sensory and chemical characterization of Cabernet Sauvignon wines from Chinese Loess Plateau. K. Tang, Y. Ma, Y. Xu

2:55 265. Effect of mixing intensity on hydrolysis of rice straw and its consequence on methane production in anaerobic digestion. M. Kim, B. Kim, Y. Choi, K. Nam

3:15 Intermission
3:35 266. Effect of caffeine concentration on the breakdown of starch into sugars by α -amylase. N. Rajan, S. Koellner, V.T. Calabrese, A. Khan

3:55 267. Tuning of complex natural products' properties used in flavors and fragrances by enzymatic treatment. H. Bouges, S. Antonioti

4:15 268. Probing the role of cation- π interaction in the thermotolerance and catalytic performance of endopolygalacturonases. T. Tu, Y. Li, Y. Wang, B. Yao, H. Luo

4:35 269. Development of a green alternative procedure for simultaneous separation and quantification of phytochemicals. Y. Yang, S. Hong, D. Wei, P. Lin, M. Wei

4:55 270. Ultra-sensitive enzyme immunoassays for the determination of imidacloprid using phage-displayed peptide. Y. Ding, X. Hua

5:15 Concluding Remarks

Nanoscale Sensing in Foods & Other Complex Media

cosponsored by ANYL, COLL, ENVR, INOR
Convention Center Room 149A Section C

T. V. Duncan, B. Park, R. G. Weiner, Organizers Y. Wang, Organizer, Presiding

1:30 Introductory Remarks

1:35 271. Three dimensional plasmonic hot spot for label-free sensing of food toxin. P.C. Ray, S.J. Jones, A. Pramanik

2:00 272. Real-time detection of heavy metals and bacteria in water using a graphene-based field-effect transistor sensing platform. J. Chen

2:25 273. DNAzyme- and DNA aptamer-based nanosensors for on-site and real-time detection in food safety and quality. Y. Lu, J. Zhang, T. Lan

2:50 274. Easy-to-use, portable and inexpensive nano-engineered sensors for assessing food quality and safety. E. Andreescu, A. Othman, K. Kirk, F. Mustafa

3:15 Intermission

3:30 275. Exploiting bio-magnetic properties for a simple and rapid label-free extraction and concentration of pathogens from complex matrices. E.C. Alocilja

3:55 276. Withdrawn

4:20 277. Electrochemical conversion of magnetic nanoparticles with multiple interfacial effects for biosensing of avian influenza virus. Y. Fu, Q. Zhang, L. Li, Q. Xie, S. Yao, Y. Li

Green Polymer Chemistry: Biobased Materials & Biocatalysis Applications of Biobased Materials

sponsored by POLY, cosponsored by AGFD, CELL, PMSE location: Marriott Marquis Ballroom Salon 8

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