



CORNUCOPIA

including the AGFD program for the
255th American Chemical Society National Meeting

March 18 - 22, 2018

in

NEW ORLEANS

BRIAN GUTHRIE, Program Chair

Attend AGFD technical sessions
at the Ernest N. Morial
Convention Center

Join the AGFD Chair's Reception
Tuesday, August 22, 6:00-8:00 pm at
Dickie Brennan's Bourbon House
(directions below)

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Directions to AGFD Chair's Reception – from the Convention Center cross Convention Center Boulevard and continue 2 blocks to S. Peters Street. Turn right on S. Peters and continue several blocks to Canal Street. Cross Canal Street (watch out for streetcars!) and turn left, continuing 4 blocks along Canal to Bourbon Street. Turn right on Bourbon and continue 1 block to the Bourbon House on your right at 144 Bourbon Street (corner of Iberville).

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!

MESSAGE FROM THE CHAIR

The spring meeting in New Orleans is almost here and abstract submission for Boston is already open! The Division is buzzing with activity! I am very excited to rub elbows with creative researchers from academia, industry and government that use their talents and energies to enhance the quality of life by advocating for safe, nutritious, and sustainable food and agricultural supplies that meet global challenges (AGFD Vision statement). As I serve as 2018 Chair of the Agricultural and Food Chemistry Division (AGFD) I stand in awe of AGFD's impact and the heart of the division which are volunteer members who selflessly and tirelessly work to drive its 'engine', serve on committees, and organize and plan timely technical sessions and symposia, etc. It is a great group to work with!

First, I'd like to report on the excellent technical program that is in place for the 255th ACS National Meeting in New Orleans. There are 14 symposia, 26 sessions and 251 papers comprised of 189 oral and 62 poster presentations covering chemistry topics from umami, spirits, sex, smoke, water, and many more. My thanks go to all the symposium organizers. Xuetong Fan is pulling together an even bigger technical program for the fall meeting in Boston.

As Lauren Jackson and her team execute the Strategic Plan for the Division, you may notice several new things as we strive to serve and build the impact of the Division for our members beyond technical programming. First, we are very excited to initiate a student committee so we can get more input from students. I welcome Kathleen Luo (UC Davis, Department of Food Science and Technology) and Zhuzhu Wang (University of Illinois at Urbana-Champaign) as charter members of the student committee. We will try some new things at the spring meeting. First we will try out Division computers in order to ease the pain often experienced as speakers prepare to make their presentations. Also, we will have a session focused on careers with a panel of AGFD scientists from academia, industry and government available to show their career paths and to answer questions. Also, at the poster session and Division reception on Sunday, we have asked several AGFD "all-star" researchers to present posters showing their research highlights. We hope this provides a good informal opportunity to meet and talk with leaders in our field and make some new friends. And in Boston, we will have a symposium featuring the editors of the *Journal of Agricultural and Food Chemistry* where they will help us understand how to get published.

Also, we are re-energizing the sub-divisions to work together to combine symposia with larger scope and impact, and to make attendance easier (less room hopping). To that end, I'd like to recognize the incoming sub-division chairs: Julie Anne Grover (Flavor), Kwang-Geun Lee (Functional Foods & Natural Products), Nitin Nitin (Biotechnology), Luke Howard (Nutrition), and Alyson Mitchell (Food Safety) and thank the outgoing sub-division chairs for their efforts.

The work of the Division would be impossible without the dedication and commitment of AGFD members. Here are 3 ways to participate - First, if you are an AGFD member - engage! You can speak to me or our councilors and officers about how you can get (more) involved. If you are interested in organizing a symposium, then attend our Future Symposia meeting on Monday at noon (Ernest N. Morial Convention Center, room 218) and meet with Xuetong Fan, AGFD Chair-elect and Program Chair for the 256th ACS National Meeting in Boston. Last, if you are not yet a member of AGFD - join now! The cost for annual membership in AGFD is nominal (\$10 if you are an ACS member and \$15 if you are not an ACS member).

And yes, you can still join AGFD if you are not an ACS member. We will have new membership application forms (see page 7 of this Cornucopia) at our information table as well as at our two must attend events: 1) AGFD Poster Session and Reception on Sunday from 5:30-8:00 PM (Hall E, Ernest N. Morial Convention Center) with complimentary popcorn and open bar (beer & wine) and 2) AGFD Chair's Reception on

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Tuesday from 6:00-8 PM (Dickie Brennan's Bourbon House, 144 Bourbon Street) with complimentary hors d'oeuvres and open bar (beer & wine). Third, networking with like-minded scientists is a benefit of an AGFD member. Please visit AGFD's interactive website (<http://agfd.sites.acs.org>) which provides a wealth of information on all membership benefits.

Last, I close by expressing my sincere gratitude to the 'AGFD family' including the executive committee and symposium organizers with special thanks to Navindra Seeram (immediate past chair, and my mentor), Xuetong Fan (Chair-Elect), Lucy Lu (Vice Chair), Hang Ma, Michael Tunick, Stephen Toth, Carl Frey, Michael Appell, Kathryn Deibler, Lauren Jackson, Alyson Mitchell, Agnes Rimando, Neil DaCosta, John Finley, and especially Michael Morello who is stepping down from his long years of service to the division as Councilor and many other things. You have made volunteering for AGFD a wonderful and fulfilling experience, my friends, and I am looking forward to working with you and with new 'AGFD family members' in the future.

Brian Guthrie 2018 AGFD Chair
Cargill Global Research brian_guthrie@cargill.com

CORNUCOPIA EDITORIAL STAFF & CONTACT INFORMATION	
Editor-in-Chief	C. Frey cfreyenterprise@gmail.com
General Manager	P. White
Staff	C. Kent, L. Lane, J. Olsen

FUTURE PROGRAMS

BOSTON August 19-23, 2018

Food Bioactives, Nano-Biotechnology and Other Delivery Systems 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

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

Taste and Aroma Modulators: Chemistry, Biology and Sensory Mathias Sukan mathias.sukan@gmail.com Brian Guthrie brian_guthrie@cargill.com David Josephson dave.josephson@mane.com Julie Ann Grover julianne.grover@kraftheinzcompany.com Tony Shao Tony.Shao@pepsico.com Yu Wang yu.wang@ufl.edu Liz Kreger Liz.Kreger@pepsico.com

Diet, Health and Gut Microbiome LinShu Liu USDA-ARS LinShu.Liu@ars.usda.gov Shengmin Sang NC A&T State University ssang@ncat.edu Indika Edrisinghe Illinois Institute of Technology iedirisi@iit.edu Francisco A. Tomás-Barberán CEBAS-CSIC Spain fatomas@cebas.csic.es Liangli (Lucy) Yu Univ. Maryland lyu5@umd.edu Chao-Qiang Lai USDA-ARS ChaoQiang.Lai@ars.usda

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

Functional Foods (with Japanese Society of Food Factors [JSoFF]) De-Xing Hou Kagoshima University Japan hough@chem.agri.kagoshima-u.ac.jp Akira Murakami University of Hyogo Japan akira@shse.u-hyogo.ac.jp Junji Terao Konan Women's University Japan terao@konan-wu.ac.jp

Advances in Methods and Protocols for Food Pathogen and Toxin Detection Bosoon Park USDA bosoon.park@ars.usda.gov Xiaohua He USDA-ARS Xiaohua.He@ars.usda.gov

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MCPD and Glycidyl Fatty Acid Esters Michael Granvogl Technical Univ. Munich Germany
michael.granvogl@tum.de Shaun MacMahon USFDA Shaun.MacMahon@fda.hhs.gov

Food Proteins: Structure Functionality, Bioactivity and Safety 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 Agnes Rimando USDA-ARS Agnes.Rimando@ars.usda.gov

CRISPR Rashmi Tiwari PepsiCo Rashmi.Tiwari@pepsico.com

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

Applied Nanotechnology for Food and Agriculture Bosoon Park USDA-ARS bosoon.park@ars.usda.gov
Sunghyun Nam USDA-ARS sunghyun.nam@ars.usda.gov

Value-Added Derivatives from Agro-based Raw Materials H. N. Cheng USDA/ARS/SRRC
hnycheng100@gmail.com Michael Appell USDA/ARS/NCAUR michael.appell@gmail.com Atanu Biswas
USDA/ARS/NCAUR abiswas1955@yahoo.com

Chemistry and Health Benefits of Natural Foods and Beverages Kwang-Geun Lee Dongguk University
kwglee@dongguk.edu Youngmok Kim Synergy Flavors, Inc. ykim@synergytaste.com

Get Published: Panel Discussion with JAFC Editors Brian Guthrie Cargill, Inc. brian_guthrie@cargill.com

Young Scientist/JAFC Best Paper Awards Kathryn Deibler Pfizer kdd3@cornell.edu

Sterling Hendricks Award (cospons w/AGRO) Agnes Rimando USDA-ARS agnes.rimando@ars.usda.gov

General Papers (oral/posters) Xuetong Fan USDA-ARS Xuetong.fan@ars.usda.gov

ORLANDO March 31-April 4, 2019

Food for Space Travel and Extreme Environments John Finley Louisiana State University jfinle5@lsu.edu
Michele Perchonok NASA mperchonok@mac.com.

Flavor Chemistry of Chiral Compounds Michael Qian Oregon State University michael.qian@oregonstate.edu
Tian Hongyu Beijing Technology And Business University tianhy@btbu.edu.cn Sun Baoguo Beijing Technology
And Business University sunbg@btbu.edu.cn.

Chemistry of Color in Foods Brian Guthrie brian_guthrie@cargill.com

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

Cereal Grain and Pulse Bioactives Fereidoon Shahidi Memorial University of Newfoundland fshahidi@mun.ca

Chemistry of Huanglongbing John Manthey USDA-ARS John.Manthey@ars.usda.gov

Flavor of Subtropical and Tropical Fruits Yu Wang yu.wang@ufl.edu

Antibiotic and Fungicide Resistance in Agriculture Xiaohua He USDA-ARS Xiaohua.He@ars.usda.gov
Xuetong Fan Xuetong.fan@ars.usda.gov

Second Global Symposium on Chemistry and Biological Effects of Maple Food Products Navindra Seeram
Univ. of Rhode Island nseeram@uri.edu Hang Ma Univ. of Rhode Island hang_ma@uri.edu

Food Fraud and Adulteration: Targeted or Non-targeted Analytical Methods Kwang-Geun Lee Dongguk
University kwglee@dongguk.edu Hyang-Sook Chun Chung-Ang University hschun@cau.ac.kr *continues on next page*

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SYMPOSIA IN DEVELOPMENT

Food Packaging Materials John Finley Louisiana State University Jfinle5@lsu.edu Michael Morello PepsiCo mike.morello@pepsico.com

Electronic Sensors for Food Safety Alyson Mitchell UC Davis aemitchell@ucdavis.edu

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

Chemistry of Mediterranean Foods Ellene Tratras Contis Eastern Michigan University econtis@emich.edu Agnes Rimando USDA-ARS agnes.rimando@ars.usda.gov



The 2nd **International Flavor and Fragrance Conference** will be held on May 28-31, 2018 in Wuxi, China. The conference is aimed at sharing advances and discoveries in the flavor and fragrance chemistry fields, and at strengthening R & D collaboration among scientists and researchers in academia, industry, and government agencies globally. The conference will cover a wide range of topics related to flavor perception, flavor analysis, chemical and biochemical generation of flavor, flavor encapsulation and delivery technologies. Visit WWW.IFF-2018.com for program and registration.

SAVE *the*
DATE!

FLAVOR SUMMIT

Industry Perspectives

You are invited to the 1st Annual Flavor Summit – Industry Perspectives workshop, hosted by the University of Florida, Citrus Research and Education Center and the University of Florida Center for Smell and Taste. This workshop will offer insights into the cutting edge science and current industry trends relevant to flavor. Topics will include flavor generation and flavor precursors, chemosensory perception and psychophysics, consumer preferences, and natural products as sources of novel flavor compounds. The training program will be provided by leading speakers from industry, government, and academic institutions around the world. Posters and tabletop demonstrations will also be available throughout the workshop.

February 5-6, 2019
Rosen Plaza Hotel, Orlando, Florida

YOU CAN RESERVE YOUR ROOM NOW!

To reserve your room, call 1-800-627-8258 and mention the University of Florida Flavor Summit to receive the conference hotel room rate

UF | IFAS
UNIVERSITY of FLORIDA

ACS National Meeting Themes

Fall 2018
Boston
Nanoscience,
Nanotechnology &
Beyond

Spring 2019
Orlando
Chemistry for New
Frontiers

Fall 2019
San Diego
Chemistry of Water

Spring 2020 Philadelphia
Macromolecular
Chemistry,
the 2nd Century

Fall 2020
San Francisco
Chemistry from
Bench to Market

Scenes from the August 2017 ACS National Meeting in Washington DC



from left Ron Wrolstad receiving the Advancement of Application of AGFD Chemistry from Navindra Seeram and Steve Toth; Russ Rouseff receiving the Distinguished Service Award from Navindra; Navindra and Guodong Zhang



from left Fereidoon Shahidi with Hang Xiao who received an AGFD Fellow Award; Michael Granvogl congratulated by Kathryn Deibler for receiving the Young Scientist Award; Shengmin Sang with Zhen-Yu Chen and Fereidoon



left AGFD friends sharing a table at the 2017 AGFD Awards Banquet in Washington

right On Monday at the ACS Meeting in Washington mother nature performed a partial solar eclipse. You would think that science types like AGFD members could handle such an event in stride but here are some comments overheard: “I only had to sign my first born away to get free eclipse-viewing glasses from ACS!” and “You got free glasses? A guy at the AGFD information table charged me \$10 for these.” and from a speaker that was indoors. “These glasses are bogus, man! I don’t see any eclipse.”
(Thanks to Abyson Michell & Hang Ma for pix.)

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
- updating members several times a year via e-mail blasts
- 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 discuss division activities at the AGFD Information table located near the AGFD technical session rooms. Join us via the 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.

Check out AGFD on You Tube: <https://mail.google.com/mail/u/0/#inbox/160d7729ab173de5?projector=1>

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: Michael Qian, Professor Department of Food Science and Technology Oregon State University Corvallis OR 97330

AGFD OFFICERS & COMMITTEE LEADERSHIP

Chair - Serves 1 year. Presides over Division meetings & appoints committees

Brian Guthrie
Cargill Food System Design
2301 Crosby Road
Wayzata MN 53391 952-742-3983
brian_guthrie@cargill.com

Chair-Elect - Serves 1 year. Substitutes for the chair as needed

Xuetong Fan
USDA-ARS
Eastern Regional Research Center
600 E. Mermaid La.
Wyndmoor PA 19038 215-836-3785
xuetong.fan@ars.usda.gov

Vice-Chair - Serves 1 year. Assists Chair-elect. Develops future technical programs.

Lucy Yu
University of Maryland
112 Skinner Bldg.
College Park MD 20742
301-405-0761 lyu5@umd.edu

Secretary - Responsible for Division correspondence and meeting minutes.

Michael Tunick
Drexel University
101 N. 33rd St. Philadelphia PA 19104
215-895-0955
mht39@drexel.edu

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

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
Lauren Jackson (thru '20)
Lauren.jackson@fda.hhs.gov
Agnes Rimando (thru '18)
agnes.rimando@ars.usda.gov

Alternate Councilors - Sub for Councilors at Council mtgs. Serve 3 yrs.

Charles Brine (thru '18)
brinec11@verizon.net
Keith Cadwallader (thru '17)
cadwlldr@uiuc.edu
Michael Qian (thru '18)
Michael.qian@oregonstate.edu
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 '20)
JLelandEnterprises@gmail.com
Robert McGorrin (thru '20)
robert.mcgorrin@oregonstate.edu
Mathias Sukan (thru '18)
Mathias.sukan@gmail.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
Student Presentations Kathryn Deibler
Kdd3@cornel.edu
Canvassing Stephen Toth
stephen.toth@iff.com

Finance - Monitors the Division's finances for 1 year. Filled by Immediate Past Chair

Navindra Seeram nseeram@uri.edu

Hospitality - Organizes receptions

Charles Brine brinec11@verizon.net

Membership - Recruits and retains Division members.

Michael Qian
Michael.qian@oregonstate.edu

Multidisciplinary Program Planning

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

Nominations - Develops officer slate Served by Immediate Past Chair.

Navindra Seeram nseeram@uri.edu

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 Julie Anne Grover
JulieAnne.Grover@krafttheinzcompany.com
Chair-Elect Elizabeth Kreger
Liz.Kreger@pepsico.com
Vice-Chair Tony Shao
tony.shao@pepsico.com
2018 Secretary GK Jayaprakasha
gkjp@tamu.edu
2019 Secretary Yu Wang
yu.wang@ufl.edu
2020 Secretary Michael Granvogl
michael.granvogl@tum.de

Functional Foods & Natural Products

Chair Kwang-Geun Lee
kwglee@dongguk.edu
Chair-Elect Hyang-Sook Chun
hschun@cau.ac.kr
Vice-Chair Hang Ma hang_ma@uri.edu
Secretary Yu Wang yu.wang@ufl.edu

Biotechnology

Chair-Elect Nitin Nitin
nntin@ucdavis.edu
Chair-Elect John Finley
jfinle5@lsu.edu
Vice-Chair Sam Alcaine
sda23@cornell.edu
Secretary Christopher Simmons
cwsimmons@ucdavis.edu

Nutrition

Chair Luke Howard lukeh@uark.edu
Chair-Elect LinShu Liu
linshu.liu@ars.usda.gov
Vice-Chair Youngmok Kim
ykim@synergystaste.com
Secretary Mina Kim minakim@jbnu.ac.kr

Food Safety

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

AWARD NEWS

Ronald E. Wrolstad, Distinguished Professor of Food Science Emeritus; Oregon State University received the 2017 **Award for the Advancement of Application of Agricultural and Food Chemistry**. Prof. Wrolstad retired in 2004 after 40 years of service, and continues to be professionally active through consulting, writing, editing and speaking. He earned his B.S. in Food Technology from Oregon State University in 1960, and his Ph.D. in Agricultural Chemistry at the University of California at Davis in 1964. The chemical composition of foods and its relationship to quality broadly describes his research interests. Anthocyanin pigments and polyphenolics of fruits and vegetables are of particular interest, with emphasis on their role in color quality of fresh and processed foods, their use as natural colorants and their possible health benefits.

The **Division of Agricultural & Food Chemistry** received a **2017 ChemLuminary Global Engagement Award for Technical Divisions** by organizing the first International Student Chapter Symposium, which demonstrated the positive impact of bringing international students together to network and share their research. Kudos to Charles Brine and Mike Tunick for organizing the symposium and to Mike Tunick for the applying for the award.

Ni Zhen Teo, Food Science & Technology, National University of Singapore won the AGFD sponsored **Graduate Student Competition Award** for presentation of research work in the field of agricultural and food chemistry at the **First Asia-Pacific International Chapters Conference** held in Jeju, South Korea on November 5-8, 2017. At the same conference **AGFD sponsored graduate student travel** for **Lijuan Du** (student of Lucy Yu) and **Nayeon Kim** (student of Yookyung Kim), allowing them to present. The meeting had 169 registrants and plenary lectures by ACS President Allison Campbell and 2016 Nobel Laureate Sir J. Fraser Stoddart.

Michael Granvogl, Technical University of Munich and currently Chair-Elect of the AGFD Food Safety subdivision won the **AGFD Young Scientist Award**. This honor recognizes scientists early in their careers for their outstanding scientific contributions to agricultural and food chemistry.

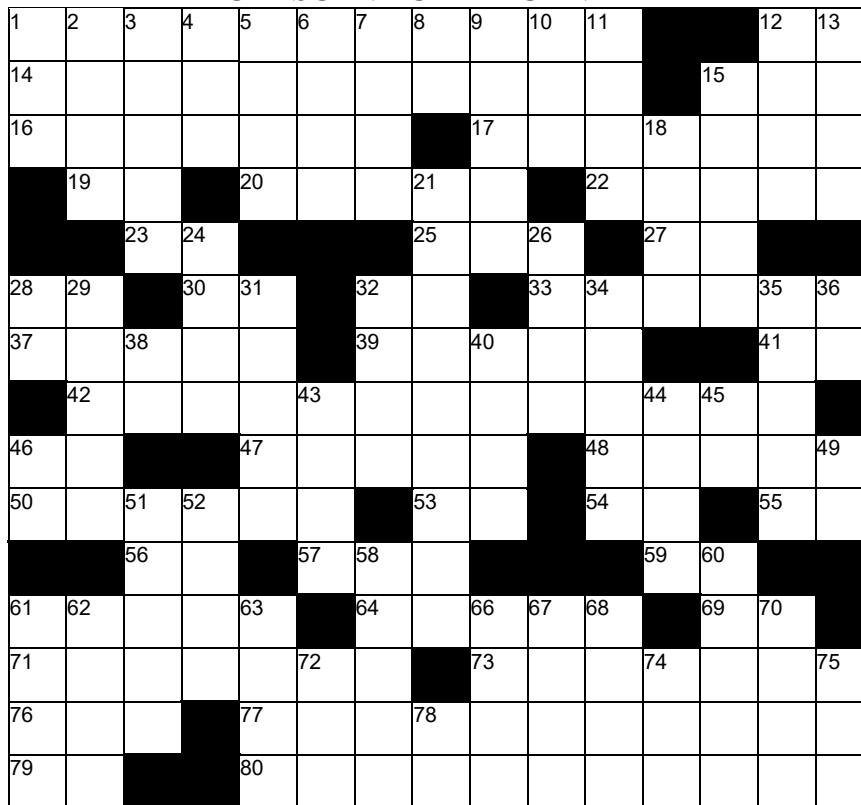
Russell Rouseff, Emeritus Professor of Food Chemistry at the University of Florida and Professor at the Citrus Research Institute in Chongqing, China received the **2017 Award for Distinguished Service to the Division of Agricultural and Food Chemistry**, recognizing his contributions in Division leadership positions, including Division Chair, and his frequent presentations at AGFD symposia.

If you're keeping count, many AGFD members have accumulated honors. Over the years the following have received recognition as **AGFD Fellows**: Robert E. Feeney, Chi-Tang Ho, Herbert O. Hutlin, Mendel Friedman, Robert L. Ory, Harold E. Pattee, Roy Teranishi, Owen R. Fennema, John W. Finley, Steven Nagy, John R. Whitaker, Marshall L. Fishman, Chang Y. Lee, Braja D. Mookherjee, Takayuki Shibamoto, Mitsuo Namiki, Wassef Nawar, Russell L. Rouseff, Eric Block, Phillip E. Shaw, Harold E. Swaisgood, Ron G. Buttery, Richard A. Scanlan, Fereidoon Shahidi, John P. Cherry, William A. Moats, George E. Inglett, Irwin E. Leiner, Tung-Ching Lee, Ron Wrolstad, Terry E. Acree, E. Allen Foegeding, Donald S. Mottram, Gary Takeoka, Shin Hasegawa, Paul Hedin, Thomas H. Parliament, Srinivasan Damodaran, Karl-Heinz Engel, Matthias Guntert, Robert Rosen, Dominic Wong, Gary A. Reineccius, Gow-Chin Yen, Casimir C. Akoh, James N. Seiber, Andrew J. Taylor, Peter Schieberle, Thomas Hofmann, Rui-Hai Liu, Eunice Li-Chan, Bhimanagouda S. Patil, Keith Cadwallader, Gary List, Sheng Min Chen, Lucy Yu, Zhen-Yu Chen, Michael H. Tunick, Youling Xiong, Mark Berhow, Sam K.C. Chang, Guddadarang K. Jayprakash, Eric Decker, Min-Hsiung Pan, Michael C. Qian, Agnes M. Rimando, Shridhar K. Sathe, Michael Appell, David Julian McClements, Alyson Mitchell, Kazuo Miyashita, Susan Ebeler, Qingrong Huang, Peter Winterhalter, Wallace Yokoyama, Andrea Buettner, Hang Xiao
The AGFD Fellow award recognizes individuals that impact agricultural and food chemistry through their excellence in leadership, management, teaching, research and volunteer service.

Many AGFD members have also received recognition as **ACS Fellows**: Terry Acree, Mike Appell, Rodney Bennett, Charles Brine, Bonnie Charpentier, H.N. Cheng, Jean Delfiner, Steve Duke, John Finley, Chi-Tang Ho, George Inglett, Lauren Jackson, John Johnston, Bhushan Mandava, Alyson Mitchell, Kim Morehouse, Mike Morello, Cynthia Mussinan, Attila Pavlath, Sara Risch, Jim Seiber, Fereidoon Shahidi, Mike Tunick, Jeanette Van Emon, John Vercellotti, Bob McGorin, Agnes Rimando, Jane V. Leland.

AGFD congratulates all these awardees.

CRESCENT CITY ACTIVITY



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

ACROSS

- 1 NOLA river of some size
12 US Prez who signed
1906 Food & Drug Act
14 upriver border of the
French Quarter
15 --- Farrow or --- Hamm
16 1971 John Lennon hit
17 these hotdogs are famous
19 Jr's dad
20 a tree w/'quaking' leaves
22 it's said to be wasted on
the young
23 HP -- or T-- or -- MS
25 --- diotactic or --- thetic
27 Chicago commuter rail
28 @
30 pre-- or post-- or black--
32 Agilent is its offshoot
33 best answer to an officer
37 the balanced zodiac sign
39 have seen more years
41 Bond nemesis, Dr. --
42 NOLA lake of some size

- 46 33.33 RPM record album
47 a literary style of O. Henry
48 of years gone by
50 digit prone to stubbing
53 -- *You Like It*
54 *Goosebumps* author Stine
55 a drop of golden sun
56 T. Heyerdahl papyrus raft
57 Boeing & Lockheed client
59 *Oh Come All - Faithful*
61 frightening
64 'blue-winged' ducks
69 -- *James Infirmary*
71 top part of a rocket ship
73 they go with 33 Across
76 Gator ---
77 NOLA's most famous
Voodoo queen
79 step between BS & Ph.D.
80 brews to drink while
while spinning on the
Hotel Monteleone's
Carousel Bar

DOWN

- 1 1101 in old Rome
2 maker of Woof Delights
3 sound mean or get tangled
4 droop
5 wide hip bones
6 info on IRS 1040 forms
7 Watch your ----!
8 spectroscopy technique
9 M's assistant: Money-----
10 an object of Mendel's study
11 teenie
12 lightly color
13 red patch of skin irritation
15 heavy hammers
18 garden cultivators
21 downriver border of the
French Quarter (w/Avenue)
24 source of zein protein
26 Moscow negative
28 element derived from bauxite
29 ----- Hedren of *The Birds*
31 paved backyard area
32 big, deep laugh

- 34 mistake on the baseball field
35 central or core
36 water purification method
38 the smell that's all you
40 Dodger pitcher Don ----dale
43 local reputation: street ----
44 Brat Pack actress ---- Sheedy
45 it's checked by a bouncer
46 short for a pound
49 element of red light signage
51 type of Welch's juice
52 burning cigarette residues
58 SNL player Cheri ----
60 cosmetics magnate Lauder
61 too good to be true deal
62 dishonorable men
63 Elmore Leonard's *3:10 to ----*
66 on the ocean
67 ---- land (state of no worries)
68 noisily close a door
70 eye drop
72 chemist's workspace
74 sun tanning wavelengths
75 ---tain or ---pect or ---pend
78 -- *Had To Be You*

Annual AGFD Business Meeting Minutes

Tuesday, August 22, 2017, Walter E. Washington Convention Center, Washington DC

Takes Place at each Fall National Meeting and is open to all AGFD members

Attendees: Michael Appell, Kathryn Deibler, John Finley, Brian Guthrie, Xuotong Fan, Lauren Jackson, Gene Lester, Robert McGorin, Alyson Mitchell, Michael Morello, Bhimu Patil, Michael Qian, Navindra Seeram, Tony Shao, Stephen Toth, Ben Toth, Lucy Yu

--- AGFD Chair called the meeting to order at 12:06pm.

--- Minutes from the previous meeting were approved.

--- The benefits of the Sunday night poster session and reception were discussed.

--- Summary of the Executive Committee meeting was given by the AGFD Chair

--- Overview and progress of goals of the AGFD Strategic Plan were presented.

--- John Finley made a motion to form a Younger Chemists Committee and this motion was seconded by Alyson Mitchell. The motion passed unanimously.

--- The following slate of officers were elected to their positions: Vice Chair Lucy Yu, Treasurer Stephen Toth, Secretary Michael Tunick. The following officers continued in the chair rotation in the listed roles: AGFD Chair Brian Guthrie, Chair-elect Xuotong Fan, and Immediate Past-Chair Navindra Seeram.

--- Under New Business, AGFD members approved the purchase of laptops for use at ACS national meetings.

Executive Committee Meeting Minutes

Monday, August 21, 2017 Walter Washington Convention Center, Washington, DC

Takes place at each ACS National Meeting

Attendees: Terry Acree, Michael Appell, Joseph Awika, Keith Cadwallader, Neil DaCosta, Kathryn Deibler, Xuotong Fan, Carl Frey, Michael Granvogl, Brian Guthrie, Eckhard Hellmuth, LinShu Liu, Hang Ma, Robert McGorin, Alyson Mitchell, Michael Morello, Bosoon Park, Bhimu Patil, Michael Qian, Agnes Rimando, Navindra Seeram, Tony Shao, Mathias Sukan, Stephen Toth, Michael Tunick, Shuo Wang, Lucy Yu

AGFD Chair Navindra Seeram called the meeting to order at 5:01 p.m.

The **minutes** of the previous meeting were approved with a correction.

Stephen Toth gave the **Treasurer's Report**. One thousand shares of one investment were cashed in. The total assets for the division are \$634,079. Costs for the Washington meeting will be less than the \$43,000 allotted, with only the graduate and undergraduate student competitions exceeding funds allocated. In San Francisco the poster night cost \$5692 and the reception \$8232.

Brain Guthrie reported that the New Orleans AGFD **Program** in March 2018 has 18 symposia scheduled. The program was discussed. Bosoon Park recommended a speaker for the thematic program there (Nexus of Food, Energy and Water). ACS will provide money for any of our symposia within that theme. Steve Toth proposed a budget of \$47,500 for that meeting and the motion was passed. Xuotong Fan will be the Program Chair for the Boston meeting in August 2018. Fifteen symposia are scheduled and the program was discussed. Mike Qian reported on the **First International Flavor and Fragrance Conference** held in Cartagena, Columbia on May 10-12, 2017. The workshop preceding it was attended by 30 people and the conference itself drew 50 abstracts and over 100 attendees. They are targeting Wuxi, China for May 2018 and Santiago, Chile for 2019. There will be 6-8 sessions in China, and support of up to \$8000 was passed. Navindra Seeram and Agnes Rimando reported that the **First Asia-Pacific International Chapters Conference** will be held in Jeju, South Korea on November 5-8, 2017. The plenary lectures will be given by ACS President Allison Campbell and 2016 Nobel Laureate J. Frasier Stoddart.

In **Subdivision** reports, Flavor Secretary Tony Shao reviewed upcoming symposia. Navindra Seeram suggested an informal subdivision meeting either during the national meeting or by conference call. It was also suggested that a champion was needed to coordinate subdivisions. Mathias Sukan, Chair of Functional Foods and Natural Products, obtained an incoming Secretary and said that they will have one symposium in New Orleans and 2-4 in Boston. Nutrition Vice-Chair LinShu Liu stated that they will also have one symposium in New Orleans, along with and two in Boston, and some money has been raised. Food Safety Chair Bosoon Park said that they will have three symposia in Boston. There was no report from the Biotechnology subdivision.

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Mike Appell, Mike Morello, and Agnes Rimando gave the **Councilor's Report**. Mike Appell reported that the Council will vote on establishing a Division of Space Chemistry. AGFD is noncommittal on the proposal (which did not pass). Changes in the selection of council committee chairs will also be voted on. He suggested that our strategic plans be placed on our web site. The committee in charge of Innovative Project Grants is looking for activities other than symposia and events. ACS has established a task force looking at special interest group programming not within divisional coverage, and might change the logo in the future. Mike Morello is on the **Meetings & Expositions Committee** and reported that AGFD is in good shape for New Orleans because our programming is within the theme there. The Washington meeting has around 100 concurrent sessions at time, which exceeds the capacity of the convention center. ACS may start a push to converting oral talks to posters and possibly eliminating Thursday programming. The Atlanta meeting in August 2021 will only be Sunday-Wednesday. Mid-size divisions such as AGFD receive attendance credit for two concurrent sessions, so we may want to condense oral symposia. Terry Acree suggested having posters outside meeting rooms and holding invited poster sessions with leaders in different aspects of the field speaking to small groups. Mike Morello agreed to write a proposal for this.

Agnes Rimando is on the **International Activities Committee**, and reported that ACS held a pilot study in which members in India pay reduced dues. A second study will be held for Chinese members. Dues reduction would be based on the economic status of the country. The first regional international chapter meeting will be held in South Korea in 2017, with the hopes that other such meetings will take place every 2-3 years. Mike Qian and Lucy Yu said that there will be smaller conferences in China that a division can cosponsor.

Bosoon Park gave the **Nominations** report. The slate of officers was approved and will be Brian Guthrie, Chair; Xuetong Fan, Chair-Elect; Lucy Yu, Vice-Chair; Michael Tunick, Secretary; Stephen Toth, Treasurer; John Finley and Lauren Jackson, Councilors, and Keith Cadwallader, Alternate Councilor. Bob McGorin has agreed to continue as At-Large Executive Committee member, and a second one will be appointed by the Chair. With her impending election as AGFD Councilor, Lauren Jackson will be leaving her position on the Committee on Science.

Awards Committee Chair Mike Morello said that award nominations will be due at the end of January. The list of AGFD award winners is: Award for the Advancement of Application of Agricultural and Food Chemistry: Ron Wroldstad. AGFD Fellow Awards: Andrea Buettner, Erlangen University, Hang Xiao, University of Massachusetts, Amherst. Roy Teranishi Graduate Fellowship in Food Chemistry: Tianxi Yang, University of Massachusetts, Amherst. AGFD Young Scientist Award: Michael Granvogl, Technical University of Munich. Withycombe-Charalambous Award for Excellence in Graduate Research in Agricultural or Food Chemistry: Jingjing Guo, Rutgers University. AGFD Undergraduate Award: Marti Hua, University of British Columbia. Award for Distinguished Service to the Division of Agricultural and Food Chemistry: Russell Rouseff. Kenneth A. Spencer Award (administered by Kansas City Section): J. Bruce German, University of California, Davis. Sterling B. Hendricks Award (administered by Agricultural Research Service, USDA): John A. Pickett, Rothamsted Research. Two AGFD members, Stephen Duke and Alyson Mitchell, won ACS Fellow Awards. Agnes Rimando, our representative on the Spencer Award committee, would like two nominations from AGFD and AGRO for that honor.

Brian Guthrie reported for Lauren Jackson about the AGFD **Strategic Planning** session. A special topics meeting was held on Sunday to review progress. Neil DaCosta compiled a list of symposia and attendance figures over the past few years to see what areas should be covered. Mike Morello said we should look at holding a small strategic planning session in 2019 or 2020.

Cornucopia editor Carl Frey reported that this was the first issue without abstracts, which saved \$1000. Exactly 298 copies were sent to Washington (about 30 were not picked up by Thursday afternoon).

Alyson Mitchell will take over **Hospitality/Public Relations**. She organized the Chair's Reception in San Francisco and the Award Banquet here.

Membership Chair Lucy Yu said AGFD had 2492 members. Mike Tunick said that among people who have been members more than one year, the largest group according to length of membership is 6-10 years, of which we have 430. Once people reach five years of membership, we tend to keep them. Several members will be recognized for 25 year membership at the banquet. With Lucy in line to be Vice-Chair, Mike Qian agreed to be the next Membership Chair.

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Navindra Seeram gave a report for Ariel Grostern, managing Editor for the **Journal**. There were 1086 articles and over 94,000 citations last year, with two million article requests. The impact factor is 3.154. Ten awards for excellence in reviewing were given out.

In **Communications**, Alyson Mitchell is still in charge of email blasts and Mike Appell runs the website. Mike Tunick suggested that AGFD members in search of a job could send a two-minute video for posting on the site. Mike Appell suggested complimentary memberships for students attending the national meeting, though Bob McGorin pointed out that some students are not chemists and are therefore ineligible. There was a discussion about increasing graduate student membership, including competitions and student representatives.

In **Old and New Business**, ACS had originally agreed to supply each symposium room with a laptop at this meeting, but changed their minds. A requirement for speakers to bring their own laptops was discussed. It was thought that purchasing a couple of laptops for use by AGFD symposium organizers may be more feasible, and this expense was approved.

The meeting adjourned at 7:17 p.m. *Submitted by Michael Tunick, AGFD Secretary*

AGFD Technical Program

Note to readers – The printed Cornucopia no longer includes Abstracts of AGFD papers. Find AGFD Abstracts on the ACS website and in the expanded Cornucopia posted on the AGFD website: **agfd.sites.acs.org**

SUNDAY MORNING March 18 Section A Ernest N. Morial Convention Center Room 218 **110th UMAMI Memorial Symposium: Past, Present, Future**

Financially supported by Ajinomoto Co., Inc. I. Edirisinghe, H. Uneyama, Organizers, Presiding
8:00 Introductory Remarks.
8:05 1. History of umami research on scientific literature. S. Fukuoka
8:35 2. Key research in umami science. G. Beauchamp
9:05 3. Beyond taste: Does umami contribute to healthier life? H. Uneyama
9:35 4. Umami in the United States: A history of Americans came to fear MSG but love umami. S. Lohman
10:05 5. Creation of global umami network through science communication. K. Ninomiya

In 2013, UNESCO recognized Umami as an intangible cultural heritage and the fifth food culture. Umami is a basic element of Japanese food originally discovered in Japan in 1908. Many long living Japanese people attribute their health to Umami. The first scientific publication related to Umami was presented at the Eighth International Congress of Applied Chemistry (New York) hosted by the ACS in 1912. Since then the collaborative scientific efforts of government, academia and industry in Japan

and the USA has taken the concept of Umami to many levels. At this symposium distinguished scientists from the USA and Japan will address the past, present and future of Umami science. Please join us to commemorate the 110th anniversary of the latest taste, Umami.

Section B Ernest N. Morial Convention Center Room 217
Energy, Water & Food Production Cospons: CELL, GEOC, MPPG M. Appell, X. Fan, J. W. Finley, B. Park, J. N. Seiber, Organizers, Presiding
8:00 Introductory Remarks.
8:05 6. Climate change and the food, energy water nexus. J.W. Finley
8:30 7. Formation of atmospheric aerosols in the presence of sulfide and amine compounds: implications for farm waste. M.J. Nee, J. Berlanga, P. van Rooy, D. Cocker, K. Purvis-Roberts, P.J. Silva, R. Mahmood
8:55 8. Managing challenges of the climate-food-energy-water nexus. S. Ahuja
9:20 9. Sorption characteristics of glyphosate in Australian soils. G. Styles, M. Rose, L. Van Zwieten, B. Follink, A. Patti
9:45 10. Nanoparticle N-P-K fertilizers synthesized by aerosol routes for sustainable and precision agriculture. R. Raliya, P. Biswas

10:10 11. Zein nanoparticles as viable delivery systems for agrochemicals. K. Ristroph, A. Prasad, E. Bodoki, C.E. Astete, A. Bodoki, C. Sabliov
10:35 Intermission.
10:55 12. The role of soil properties on the transformation, fate and efficacy of nano-enabled agrochemicals in the soil system. S. Rodrigues, S. Lopes, T. Trindade, A. Duarte, R. Duarte, X. Gao, G.V. Lowry
11:20 13. Immobilization and phytoavailability of iron (Fe) in contaminated soil amended with organic matter. A. Parvez

Section C Ernest N. Morial Convention Center Rm 216

International Student Symposium Analytical Strategies F. Pellati, P. Schmidberger, Organizers R. Tardugno, Organizer, Presiding

A. Schulz, Presiding
8:30 Introductory Remarks.
8:35 14. Development of an indirect competitive enzyme-linked immunosorbent assay for Matrine and analogues in agricultural samples. J. Hao, E. Sheng
9:05 15. Novel benzophenone isolated from Psidium guajava L. leaves and its antineoplastic effects on human cancer cells. X. Zhu, W. Ouyang, C. Pan, Z. Gao, Y. Han, M. Song, K. Feng, Y. Cao, H. Xiao
9:35 16. Effectiveness of commercial and homemade washing agents in removing pesticide residues on and in apples. T. Yang, L. He
10:05 Intermission.
10:15 17. The chemistry of beer haze. B. Baechler, A. Dunkel, T. Hofmann
10:45 18. Metabolomic profiling of saliva and pellicle samples collected from healthy and caries patients. A. Schulz, R. Lang, J. Behr, S. Hertel, C. Hannig, M. Hannig, T. Hofmann

Water, Water Everywhere But Not a Drop to Drink: Preserving, Protecting & Delivering Clean Water

Location: Hilton New Orleans Riverside Spons: PRES Cospons: AGFD, BMGT, CATL, CEI, CELL, CHAS, CHED, COLL, CTA, ENVR, GEOC, I&EC, INOR, MPPG, SCHB, YCC
Frontiers in Glycoscience, Bridging the Gap Between Carbohydrate & Polysaccharide Chemistries
Location: Loews New Orleans Spons: CELL Cospons: AGFD, ANYL, CARB

SUNDAY AFTERNOON March 18 Section A Ernest N. Morial Convention Center Room 218
Water in Foods Symposium in honor of Louise Slade & Harry Levine Food Polymer Science

J. W. Finley, Y. Roos, Organizers, Presiding
1:00 Introductory Remarks.
1:30 19. 37-year retrospective on Slade/Levine's 'Food Polymer Science' approach to the practice of industrial R&D, leading to U.S. patent estates based on fundamental starch science and technology. L. Slade, H. Levine
2:30 20. Crystallization, crispness, caking and creep: The glass of water overturned. T.P. Labuza
3:00 Intermission.
3:10 21. Approaches for structure-properties-performance translation of relaxation times data around glass transition. Y. Roos
3:40 22. Physical state of sugar in baked goods: Revisiting an early "Food Polymer Science" application. J. Ubbink, N. Salgado Lopez, K.M. Matsune, S. Amin
4:10 23. Water induced structural hysteresis in food systems. S. Mizrahi
4:40 24. Complementary tools to interpret the role of water as related to structure and functionality of cereal food products. G. Rolandelli, S. Rodriguez, M. Cueto, A. Farroni, P. Buera

Section B Ernest N. Morial Convention Center Room 217

Energy, Water & Food Production Cospons: CELL, GEOC, MPPG M. Appell, X. Fan, J. W. Finley, B. Park, J. N. Seiber, Organizers, Presiding

1:00 Introductory Remarks.
1:05 25. Creatine a scavenger of methylglyoxal (MGO), a potent neurotoxin: Physiological role of creatine in energy metabolism. B. Dayal, M.A. Lea, P. Chitkul, H. Sorkin
1:30 26. Nexus of beer, water and energy: California lager microbrewery as a case study of embedded water and energy in the brewing process. S. Peterson, C. Simmons, N. Spang
1:55 Intermission.
2:15 27. Combating citrus greening with plastic. V.A. Piunova, N.F. Fine Nathel, J.L. Hedrick
2:40 28. Effects of metal oxide nanoparticles on the growth of kale. J. Vassell, A. Racelis, Y. Mao

- 3:05 29. Paper-based nanosensors for selective detection of infected crops. O.A. Sadik
 3:30 30. Indigo's potential to address long-term food security in an era of global change. J. McIntyre
 3:55 31. Assessing agricultural intensification strategies with a sustainable agriculture matrix. X. Zhang
 4:20 32. Inexpensive superhydrophobic sand mulches for dryland agriculture. A. Gallo, Jr., J. Reihmer, M. Mousa, M. Morton, S. Al-Mashharawi, M. McCabe, M. Tester, H. Mishra
 4:45 33. Water-energy-food nexus and ecosystem service challenges with climate change implication in California case studies. Q. Liu
 5:10 Panel Discussion.

Section C Ernest N. Morial Convention Center Rm 216

International Student Symposium Bioactives & Cell Studies

- F. Pellati, P. Schmidberger, Organizers R. Tardugno, Organizer, Presiding A. Schulz, Presiding
 1:00 Introductory Remarks.
 1:05 34. Permethrin and ivermectin modulate lipid metabolism in steatosis-induced HepG2 hepatocytes. S. Yang, W. Qi, S. Choi, J.M. Clark, Y. Park
 1:35 35. Investigation of the bioavailability, antioxidant and anti-inflammatory activities of carnosic acid lecithin based nano delivery system by in vitro cell models. H. Zheng, Q. Huang
 2:05 36. Hydrophilic modification of zein protein and its application in amorphous solid dispersions to enhance dissolution of Dihydromyricetin. H. Zhang, Q. Huang
 2:35 Intermission.
 2:45 37. Anti-inflammation and anti-cancer effect of polyphenols from blueberry (*Vaccinium corymbosum* L.). C. Pan, Z. Gao, Y. Han, H. Xiao
 3:15 38. Pickering emulsions stabilized by milled cellulose particles. X. Lu

Food at the Crossroads: Chemistry's Role in Sustainability, Past & Present

Location: Hilton New Orleans Riverside Spons: HIST Cospons: AGFD, CHED, DAC, PRES, MPPG

Frontiers in Glycoscience, Bridging the Gap Between Carbohydrate & Polysaccharide Chemistries

Location: Loews New Orleans Spons: CELL Cospons: AGFD, ANYL, CARB

SUNDAY EVENING March 18 5:30 - 7:30pm
 Section A Ernest N. Morial Convention Center Hall E

General & AGFD All-Star Posters

- B. D. Guthrie, Organizer
 39. Multiplex and label-free screening of foodborne pathogens using surface plasmon resonance imaging. J. Chen, B. Park
 40. Computational studies on the excited state properties of citrinin and application in fluorescence analysis. M. Appell, Y. Tu, W. Bosma
 41. Traveling the world with food science. J.V. Leland
 42. Ion mobility mass spectrometry of *Garcinia buchananii* extracts and analysis of other *Garcinia* species. T. Hofmann, T.D. Stark, J. Ranner
 43. Development of a rapid high-throughput mass spectrometry-based method for the quantification of monosaccharides in food. T. Vo, A.G. Galermo, M. Amicucci, C.B. Lebrilla
 44. Characterization of gelation kinetics of gelatin using fluorescence spectroscopy. A. Ciarfella, R. Chib, M.G. Corradini, S. Ilg, C. Escusa, R.D. Ludescher
 45. Development of paper-polymer hybrid chip for multiplexed detection of foodborne pathogens. L. Zhang, J. Choi, X. Lu
 46. Study of volatile compounds with antifungal activity from bacteria of marine origin. L.C. Coconubo, F. Ramos, L. Castellanos, N. Moreno, D.C. Sinuco Leon
 47. Preparation and characterization of seed film coating adhesive for anti-dust. D. Ku, J. Lee, J. Lee, J. Kim, J. Shim, T. Kim
 48. Concentration and removal of phosphate from corn thin stillage using biobased flocculants and ferric chloride. G.J. Piazza, D.B. Johnston, R.A. Garcia
 49. Bio-based methacrylic acid via catalytic decarboxylation of itaconic and citric acids. B.R. Moser, R.E. Murray, J.C. Lansing
 50. Structure and compositional features of feruloylated arabinoxylan oligosaccharides isolated from rice bran fiber. K. Takahashi, B.J. Savary, S. Lee, N.C. Carpita

51. Structure, composition, and oligosaccharide profiles for hemicellulosic polysaccharides isolated from rice bran fiber. D. Kandanoor, A. Vallalpa-Arroyo, K. Takahashi, B.J. Savary, N.C. Carpita
52. Determination of lactose in low lactose products. J. Rohrer, M. Aggrawal
53. Rethinking resveratrol from red wine: The first characterization of piceatannol-ortho-quinone, a structural analogue of carcinogenic estradiol-3,4-quinone. M.K. Parunyan, J. Jensen, E. Philippas, G.G. Melikyan
54. Effects of feeding entrapped fish oil in chemically treated protein matrix on physicochemical properties of caprine milk fat. J.H. Lee, B.B. Lemma, C.R. Alfred
55. Quality assessment of moisture exposed almonds using chemical markers. K. Luo, A.E. Mitchell
56. Extraction and quantitation of furfuryl alcohol in fluid milk and dairy powders. M. Benoist, B. Wherry, M. Drake
57. Animal and human studies investigating the beneficial effects of cranberry juice on heart disease. J.A. Vinson
58. The prokinetic and laxative effects of mulberry (*Morus nigra*). T. Hu, Y. Zou, Q. Li, E. Li, S. Wang, S. Liao
59. Fatty acid and sugar composition of African walnut (*Plukenetia conophora* Mull.Arg) root bark. O.O. Onawumi, P.B. Ayoola
60. Hydrophilic interaction chromatographic (HILIC) determination of ascorbic acid in citrus fruits and pharmaceutical formulations. R. Zuo, S. Zhou, Y. Zuo, Y. Deng
61. Phenylalanine ammonia lyase activity and antioxidant properties of *Cissus sicyoides* berries. K.S. Duffus, A. Goldson-Barnaby
62. Extraction and quantification of lycopene content for high performance liquid chromatography analysis using alternative solvents. J. Noseworthy
63. Comparative analysis of silymarin using different extraction techniques. D. Hlangothi, K. Anthony, M.A. Saleh
64. Chemical profile of *chrysanthemum morifolium* and its nutraceutical properties. L. Yanfang, B. Gao, L. Yu, U. Choe, H. Huang, T. Wang, L.L. Yu
65. Determination of polyphenolic antioxidants in natural and processed foods by copper nanoparticles. Y. Ahmadibeni
66. Determination of fluoride in tea using combustion ion chromatography. H. Yang
67. Reverse phase high performance liquid chromatography with photodiode array detection method for the identification and quantification of fat-soluble vitamins in plasma. S. Tucker, K. Broughton
68. Anthocyanin concentrations, antioxidant properties, and phenolic contents among commercially available acai berry supplements. T. Beadle, E.D. Niemeyer
69. Influence of fatty acids on the formation of zein-based colloidal particles. J. Zhu, Q. Huang
70. Yeast viability determination by smartphone camera. A. Nilles, D.J. Lecaptain
71. Modification of sensory-chemical quality of lingonberry (*Vaccinium vitis-idaea*) products using polymers. N. Kelanne, O. Laaksonen, B. Yang, W. Yang
72. Identification and quantification of flavor compounds in birch syrup using SPME-GC-MS. S. Lloyd, A. van den Berg, C.C. Grimm
73. Honey typing by comparison of flavor compounds in floral nectars and honeys. K. Petz, T. Calamita, L.E. Schweitzer
74. Effect of hot/cold cycling and air exposure on beer IBU values. J. Welbaum, N.O. Flynn
75. Composition profile: A comparative study of hop varieties grown in the Midwest and Pacific Northwest of the United States. X. Xie, L. Gao, C. Xu
76. Investigation of catfish marinate treatments on the degradation of off-flavor components, geosmin and 2-methylisoborneol. J.M. Bland, C.H. Li, K.L. Bett-Garber, C.C. Grimm, P. Bechtel
77. Optimizing the analysis for off-flavors in fish tissue. C.C. Grimm, J.M. Bland, C. Li, P. Bechtel
78. Thermal desorption with GC-MS to detect volatiles in craft beer. A. LyVere, D.J. Lecaptain
79. Static headspace GC-FID/MS method for the determination and quantitation of residual solvents in natural food ingredients. F. Al-Taher, B.V. Nemzer
80. Production of mushroom β -glucan-gold nanorod hybrids for photothermal therapy of cancer. X. Li, P.C. Cheung
81. Quantitative analysis of arsenic and cadmium in dog food. K. Pollok, R. Nava, B. Corporon, A.M. Bray
82. Functional analyses on antioxidant, antitumor and hepatoprotective effects of extracts and compounds from *Cirsium japonicum* DC. Q. Ma

83. Washing tomato fruit with organic acids to reduce populations of Salmonella and preserve fruit quality. X. Fan, J. Gurtler, K. Sokorai

84. Aged catechol solutions model the chemical and biochemical properties of the aqueous cigarette tar radical. C. Lopez, A.R. Skochko, S.K. Mendez, E.A. Aleman, K. Stone

85. Identification and functional analysis of the aspergillilic acid gene cluster in *Aspergillus flavus*. M. Lebar, J. Cary, R. Majumdar, C. Carter-Wientjes, B. Mack, Q. Wei, V. Uka, S. De Saeger, J. Diana Di Manvungu

86. Development of rapid dispersive pipette extraction method for analysis of aflatoxins and major metabolite using high performance liquid chromatography (HPLC). H. Guan, Q. Cai

87. Plant cuticular waxes as renewable encapsulating matrices for phosphate fertilizers: Morphological insights into phosphate release behavior. E.M. García Carrillo, N.B. Navarro-Guajardo, C. Espinoza-González, J. Romero-García, A.S. Ledezma-Pérez, C.A. Pérez Torres, N. Pariona

88. Sequence alignments and structural comparisons of insecticides targeting acetyl cholinesterase and their relationship to ecotoxicity/toxicity. Z. Kai, F.H. Wu

89. Fate and transport of dicyandiamide (DCD) and its nitrification inhibition in agricultural soils. S. Li, R. Li, G. Chen

90. Chemistry of plant root signaling compounds with importance for the plant-associated microbiome and disease resistance. K. Hooshmand, E.N. Kudjordjie, R. Sapkota, M. Nicolaisen, I.S. Fomsgaard

91. Importance of animal production to produce energy. T. Akinmusire

92. Water and energy in agriculture. T. Akinmusire

93. Adduct formation from chlorinated benzonitrile pesticides and DNA in plants. M. Byron, D.W. Boerth

94. Molecular and immunological characterization of recombinant termite (*Coptotermes formosanus*) arginine kinase. C.P. Mattison, A. Tungtrongchitr

95. Screening and health risk of organic micro-pollutants in rural groundwater of China. X. Li, T. Tian, X. Shang, Q. Xie, J. Chen, K. Kadokami

96. New insights into kinetics and dynamics of initial stages of bacterial adhesion onto surfaces mimicking food crops. J. Oh, Y. Yegin, L. Cisneros-Zevallos, M. Akbulut

97. Determination of inorganic anions in wastewater using capillary ion chromatography. H. Yang

98. Chemical space of in-use and banned pesticides. K. Martinez Mayorga, D. Chavez-Gomez, F. Cortes-Guzman

99. Analysis of volatile organic compounds from *M. phaseolina* fungi infected sweet potatoes. C.U. Gamlath Mohottige, J. She, T. Mlsna, R. Baird, R. Bigham

MONDAY MORNING March 19 Section A
Ernest N. Morial Convention Center Room 216

Water in Foods Symposium in honor of Louise Slade & Harry Levine Water Plasticization

J. W. Finley, Y. Roos, Organizers Y. Roos, Organizer, Presiding T. P. Labuza, Presiding
8:00 100. Impact of sucrose and water contents on macroscopic structure and stability of cereal based products: Thermodynamic versus dynamic. S. Masavang, C. Loupiac, P. Bodart, G. Roudaut, D. Champion

8:30 101. Sucrose crystallization and the state diagram: A review. R.W. Hartel, K. Payne

9:00 102. Fundamentals and consequences of food ingredient architecture and water-solid interactions. L.J. Mauer

9:30 103. Plasticization and antiplasticization in amorphous carbohydrates: A structural interpretation. J. Ubbink

10:00 Intermission.

10:20 104. Physical stability of solid food products: Development and applications of material science within Nestlé since 30 years. V. Meunier

10:50 105. Water mobility approach to food product development. Y. Kou

11:20 106. A decade of work: Developing applications for dynamic moisture sorption curves. B. Carter

Section B Ernest N. Morial Convention Center
Room 217

Withycombe-Charalambous Graduate Student Symposium K. D. Deibler,

Organizer, Presiding

9:00 Introductory Remarks.

9:05 107. Engineered bacteriophage-based electrochemical detection of *Escherichia coli* in food samples. D. Wang, J. Chen, T. Hinkley, S.R. Nugen

9:30 108. Real-time and in situ monitoring and characterization of pesticide residues on and in

fresh produce using surface-enhanced Raman spectroscopy. T. Yang, L. He
9:55 109. Identification of Bifidobacterium pseudocatenulatum D2 as a probiotic with anti-inflammatory and anti-cancer potential. M. Gu, C. Pan, Z. Gao, H. Xiao
10:20 Intermission.
10:35 110. Conjugated linoleic acid regulates body composition and locomotor activity in sex-dependent manners in Drosophila melanogaster. P.B. Chen, J. Kim, J.M. Clark, Y. Park
11:00 111. Development of innovative techniques for food authentication: The last barrier to prevent food fraud. Y. Hu, X. Lu
11:25 112. Peptidomic profiling of human milk by mass spectrometry revealed pH-specific milk proteolysis. J. Gan, J. German

Section C Ernest N. Morial Convention Center Rm 218

Chemistry of Spirits K. R. Cadwallader, M. Granvogl, M. C. Qian, Organizers, Presiding
8:30 Introductory Remarks.
8:35 113. Flavor chemistry of spirits: An overview. M.C. Qian
9:00 114. Factors influencing the key aroma compounds of rum. L. Franitza, L. Nicolotti, M. Granvogl, P.H. Schieberle
9:25 115. Gin still configuration and its impact on botanical oil distillate profiles in final product. P.S. Hughes
9:50 116. Sensory and volatile analysis of American whiskeys with different mashbills: Can we discriminate rye and bourbon whiskeys? J. Lahne, T. Collins, H. Abdi, H. Heymann
10:15 Intermission.
10:30 117. Influence of ethanol on flavor perception in distilled spirits. K.R. Cadwallader, C. Ickes
10:55 118. Characterization of flavor and odor compounds in blueberry beer by GC-MS: Effects of blueberry and hop addition on chemical composition. K.M. Papon, M.C. Crowe
11:20 119. Shaken not stirred, y'all: A comparison of Texas vodkas, part two. G.R. Shelton, M. Montoya, S.B. Bach, D.S. Mason

Food at the Crossroads: Chemistry's Role in Sustainability, Past & Present

Location: Hilton New Orleans Riverside Spons: HIST Cospons: AGFD, CHED, DAC, PRES, MPPG

Frontiers in Glycoscience, Bridging the Gap Between Carbohydrate & Polysaccharide Chemistries

Location: Loews New Orleans Spons: CELL Cospons: AGFD, ANYL, CARB

MONDAY AFTERNOON March 19 Section A Ernest N. Morial Convention Center Room 216

Water in Foods Symposium in honor of Louise Slade & Harry Levine Water Structure J. W. Finley, Y. Roos, Organizers L. J. Mauer, V. Meunier, Presiding
1:00 120. Sugar stereochemistry effects on water structure and on protein stability: The templating concept. Y. Livney, R. Edelman, I. Kusner, R. Kisiliak, S. Srebnik
1:30 121. Multiple solvent-slaved dynamic processes in human serum albumin monitored by phosphorescence spectroscopy. A. Draganski, J.M. Friedman, R.D. Ludescher
2:00 122. Analysis of the frozen state of Sephadex G25 gel by using X-ray CT and XRD. N. Murase, Y. Uetake, K. Irie, Y. Ueno, T. Hirauchi, T. Kawahara, M. Hirai
2:30 123. Local and mesoscopic-scale water structure and inhomogeneity: Implications for freezing and stability of amorphous pharmaceuticals. E. Shalaev, A. Soper, A. Zeitler, S. Ohtake, C.J. Roberts, M.J. Pikal, K. Wu, B. Zakharov, E. Boldyreva
3:00 Intermission.
3:20 124. Interactions between biopolymers, solutes and water as controlling factors of the structuring pathway in food matrices: Material science based guidelines for the design of bakery products with improved nutritional profile. S. Renzetti
3:50 125. Role of large deformation mechanics and osmotic capillarity in water holding and drying of biological tissue. R. van der Sman
4:20 126. 2D 1H T1-T2 NMR investigation of standard and gluten free bread during staling. E. Vittadini, E. Curti, P. Littardi, E. Carini

Section B Ernest N. Morial Convention Center Room 217

Chemistry of Sex T. E. Acree, J. W. Finley, S. J. Toth, M. H. Tunick, Organizers K. D. Deibler, A. E. Mitchell, Organizers, Presiding
1:00 Introductory Remarks.
1:05 127. Mind of sexual chemistry: How foods, fragrances, situations, and people drive the expectation of erotic encounters. A. Gere, D. Radványi, P. Papajorgji, H. Moskowitz

1:30 128. Fragrance and attraction. A.P. Narula
1:55 129. Chemistry of chocolate and pleasure.
M.H. Tunick, J.A. Nasser
2:20 130. Wine and sex: Potential effects of
odorants on sexuality. T.E. Acree, A. Barwich
2:45 131. Environmental toxicants: "The
elephant in the room" risk factor for male sexual
dysfunction. L.M. Alzweri, A.L. Burnett, W.J.
Hellstrom, S.C. Sikka
3:10 Intermission.
3:25 132. Bitterness of active pharmaceutical
Ingredients (API): From Advil® (ibuprofen) to
Viagra® (sildenafil). K.D. Deibler
3:50 133. Sex toys, edible underwear, and
personal lubricants: Applying food safety
principles to sex paraphernalia design. R.
Worobo
4:15 134. Wavelength dispersive x-ray
fluorescence (WDXRF) for elemental analysis of
sexual performance supplements, edible
garments, gummies and lubricants. A.E.
Mitchell, T. Nguyen, G. Williams

Section C Ernest N. Morial Convention Center
Rm 218

Chemistry of Spirits K. R. Cadwallader, M.
Granvogl, M. C. Qian, Organizers, Presiding
1:00 Introductory Remarks.
1:05 135. Characterization of the key aroma
compounds in Meilanchun sesame flavor style
Baijiu by aroma extract dilution analysis,
quantitative measurements, aroma
recombination, and omission/addition
experiments. M. Huang, Q. Li, S. Luo, B. Sun,
F. Zheng, J. Sun, X. Sun, H. Li
1:30 136. Key flavor compounds in ultra-aged
tequila. A. Aguirre-Flores, Y.L. Qian, P.
Vazquez, M.C. Qian
1:55 137. Characterization of key aroma
compounds in Gujinggong Chinese Baijiu by gas
chromatography-olfactometry, quantitative
measurements, and sensory evaluation. J. Sun,
D. Zhao, D. Shi
2:20 Intermission.
2:35 138. Determination of volatile compounds
in Chinese Baijiu-Laobaigan by comprehensive
two-dimensional gas chromatography/high
resolution-time of flight mass spectrometry. Y.
Ma, J. Sun, F. Zheng, H. Li, Y. Zhang, F. Zhang,
B. Sun, F. Chen
3:00 139. The soul of "Qingke" liquor from Tibet.
Y.L. Qian, S. Chen, M.C. Qian

Food at the Crossroads: Chemistry's Role in Sustainability, Past & Present

Location: Hilton New Orleans Riverside Spons:
HIST Cospons: AGFD, CHED, DAC, PRES
MPPG

Nexus of Food, Energy, & Water: Adapting to Future Challenges

Location: Ernest N. Morial Convention Center
Spons: MPPG Cospons: AGFD, ENFL, ENVR

Frontiers in Glycoscience, Bridging the Gap Between Carbohydrate & Polysaccharide Chemistries

Location: Loews New Orleans Spons: CELL
Cospons: AGFD, ANYL, CARB

Sustainable Production & Processing of Agricultural Crops: The Food, Energy, Water Nexus

Value Added from Agricultural Crops

Location: Loews New Orleans Spons: CELL
Cospons: AGFD, ENFL, ENVR, MPPG

AGFD Undergraduate Research Posters

Location: New Orleans Marriott Convention
Center Spons: CHED Cospons: AGFD,
SOCED

TUESDAY MORNING March 20 Section A
Ernest N. Morial Convention Center Room 216

Water in Foods Symposium in honor of Louise Slade & Harry Levine Water & Stability

J. W. Finley, Y. Roos, Organizers

B. Carter, S. Mizrahi, Presiding

8:00 140. Water of crystallization in
pharmaceutical products. J. Rantanen
8:30 141. Predicting the crystallisation of sugar
in dried raisins and honey. B. Bhandari, D.
Dahal, T. Truong, P. Urrutia, S. Almonacid
9:00 142. Role of water in food powders:
process/product interactions. S. Desobry, P.
Schuck
9:30 143. Effect of polyols on the stability of
dairy proteins in high protein systems. P. Zhou
10:00 Intermission.
10:20 144. Chemical stability in low and
intermediate moisture systems: The role of
water activity and glass transition. L.N. Bell
10:50 145. Water in starch, laponite and in its
nanocomposite films. G. Ayala Valencia, M.
Djabourov, F. Carn, P. do Amaral Sobral
11:20 146. Applications of probabilistic
engineering in food moisture management to

meet product quality, safety and shelf-life requirements. J. Torres, V. Rodriguez Martinez, G. Velazquez, J. Welti-Chanes

Section B Ernest N. Morial Convention Center Room 217

Kenneth A. Spencer Award Symposium

Cospons: AGRO E. Hellmuth, Organizer

W. H. Yokoyama, Organizer, Presiding

8:30 147. Modernizing polysaccharide analysis: An LC/MS-based platform for characterizing nature's most difficult biomolecule. M. Amicucci, C.B. Lebrilla

9:00 148. Impact of milk on the metabolic phenotype of the developing neonate. C. Slupsky

9:30 149. Using genomics and glycomics to investigate bioactive oligosaccharide production in dairy cows. R.C. Robinson, N.A. Poulsen, L.B. Larsen, D. Barile

10:00 Intermission.

10:10 150. The Kenneth A. Spencer Award.

J.N. Seiber

10:25 151. Recent milk genomics research and the discovery of probiotic carbohydrate constituents. J. German

Section C Ernest N. Morial Convention Center Rm 218

Environmental Effects on Gulf Coast Seafoods

E. S. Maung-Douglass, Organizer J. W. Finley,

D. Holliday, Organizers, Presiding

8:00 Introductory Remarks.

8:05 152. Quality and safety of Gulf seafood is some of the finest in the world. D.L. Holliday, J.W. Finley, M.A. Tarr

8:30 153. Modeling 3D fish movement in the Gulf of Mexico hypoxic zone. E. LaBone, D. Justic, K. Rose, L. Wang, H. Huang

8:55 154. Petroleum hydrocarbons in coastal environments of the northern Gulf of Mexico after Deepwater Horizon oil spill. Z. Liu

9:20 155. Ag nutrient use in Illinois: Meeting N & P loss reduction goals by 2025 against all odds. J. Payne

9:45 156. Distribution of dispersant-related surfactants in the Gulf of Mexico area following the Deepwater Horizon oil spill. J. Gray, L.K. Kanagy, C.J. Kanagy, J.W. McCoy, E.T. Furlong

10:10 Intermission.

10:30 157. "Farming" seafood following a marine oil spill: Seafood safety and perspectives from harvesters, consumers, and public health

scientists. J. Wickliffe, B.R. Simon-Friedt, M.J. Wilson, J.L. Howard, E. Frahm, D. Nguyen, D. Gauthé, B. Meyer, D. Pangeni, E.B. Overton

10:55 158. Oil spilled in marine systems:

Photochemistry and impacts on aquatic

organisms. M.A. Tarr, X. Cao, P. Zito, D.C.

Podgorski, B.H. Harriman, J.M. Sufliata, S. King,

T.M. Soniat, M.A. Thorne

11:20 159. Estimated effects on fish larvae of water column polycyclic aromatic hydrocarbons (PAH) during and after the Deepwater Horizon (Macondo) incident. T.L. Wade

11:45 160. Health effects associated with dispersant exposure during the Deepwater Horizon oil spill response: Findings from the GuLF STUDY. L. Engel, C. McGowan, K. Gam, M. Curry, R. Kwok, M. Lichtveld, A. Miller, M. Stenzel, P. Stewart, D. Sandler

Impacts of Mining & Hydraulic Fracturing On Crop & Livestock Production

Location: Ernest N. Morial Convention Center

Spons: GEOC Cospons: AGFD, AGRO, ENVR

Biobased Water Purification System Approaches

Location: Loews New Orleans Spons: CELL

Cospons: AGFD, CHAS, ENVR

Sustainable Production & Processing of Agricultural Crops: The Food, Energy, Water Nexus

Food, Water & Energy from Sustainable Crops

Location: Loews New Orleans Spons: CELL

Cospons: AGFD, ENFL, ENVR, MPPG

TUESDAY AFTERNOON March 20 Section A Ernest N. Morial Convention Center Room 216 Water in Foods Symposium in honor of Louise Slade & Harry Levine The Glassy State

J. W. Finley, Y. Roos, Organizers P. Buera, D. Champion, Presiding

1:00 161. Powder structure and the influence of water from drying to dissolution. A. Millqvist Fureby

1:30 162. Role of water in encapsulation of food ingredients. S. Drusch

2:00 163. Thermal properties and molecular mobility of amorphous trehalose-limonene matrices obtained by different glass-forming approaches: Desolvation vs. solid state. P.

Pittia, M. Faieta, M. Geppi, F. Panattoni, L. Neri

2:30 Intermission.

2:50 164. Evaluation of water sorption and thermal properties of galacto-oligosaccharides, and application in glassy confections. Y. Vodovotz

3:20 165. Enhanced thermotolerance of probiotic cells during dynamic droplet drying compared to heat treatment. N. Fu, X.D. Chen

3:50 Concluding Remarks.

Section B Ernest N. Morial Convention Center Room 217

Kenneth A. Spencer Award Symposium

Cospons: AGRO E. Hellmuth, Organizer W. H. Yokoyama, Organizer, Presiding

1:00 166. The evolution of interesterified lipids from curiosity to designer lipids for food and pharma application. J.W. Finley

1:30 167. Development of an immunoassay for amanitin, a highly toxic mushroom toxin. C. Bever, B. Barnych, L.H. Stanker

2:00 168. Identification of botulinum neurotoxin serotype A inhibitors using in vitro cell and oral models of intoxication. L. Cheng, C. Tam, L.H. Stanker

2:30 169. Stability, bioavailability, and detection of abrin. C. Tam, L.H. Stanker, L. Cheng

3:00 Intermission.

3:10 170. Fiber and polyphenolics that prevent metabolic dysfunction in diet induced animal models. W.H. Yokoyama, H. Kim, T. Arvik

3:40 171. Bioactive lipid profiles as indicators of exposure. M.L. Nording

4:10 172. Adsorption behavior of sunflower lecithin at an air-water interface: Role of lysolecithin. J. Staton, S.R. Dungan

4:40 173. Local equilibrium flavor distributions in short-chain lecithin solutions. A. Karman, S.R. Dungan, N. Nitin, S.E. Ebeler

Section C Ernest N. Morial Convention Center Rm 218

Career Trajectories for Ag & Food Chemists: Panel Discussion

B. D. Guthrie, Organizer, Presiding

1:00 Introductory Remarks.

1:10 174. My career as a regulatory scientist at U.S. Food and Drug Administration. L. Jackson

1:20 175. Career trajectories in agricultural and food chemistry: An academic path. A.E. Mitchell

1:30 176. My career path as an industrial agriculture and food chemist. S.J. Toth

1:40 Panel Discussion.

Impacts of Mining & Hydraulic Fracturing On Crop & Livestock Production

Location: Ernest N. Morial Convention Center

Spons: GEOC Cospons: AGFD, AGRO, ENVR

Sustainable Production & Processing of Agricultural Crops: The Food, Energy, Water Nexus Biomaterials Processing

Location: Loews New Orleans Spons: CELL

Cospons: AGFD, ENFL, ENVR, MPPG

WEDNESDAY MORNING March 21 Section

A Ernest N. Morial Convention Ctr Rm 216

General Papers Pesticides, Herbicides & other Active Natural Chemicals

B. D. Guthrie, Organizer K. D. Deibler, Presiding

8:00 Introductory Remarks.

8:05 177. Substantial reduction of herbicide application rates using a novel nanostructured pesticide delivery technology. E. Manek, R.V. Jones, F. Darvas

8:25 178. N-halamine surface functionalization of stainless steel substrates with dual antimicrobial and regenerable character for potential use in the food industry. B. Demir, S.D. Worley, R. Broughton, T. Huang, M.J. Bozack

8:45 179. Determination of ionic herbicides in beverages and fruit samples using ion chromatography coupled with high resolution accurate mass spectrometry. T. Christison, S. Adams, R. Fussel, J. Beck, J. Rohrer

9:05 180. Fatty acids profiling as a biomarker of exposure to pesticides. F.H. Abdel-Rhman, D. Adisa, O. Owopetu, P.S. Henry, S. Jamadar, K. Anthony, T. Nguyen, B.L. Wilson, M.A. Saleh

9:25 181. Fungicide and insecticide dissipation in soil used for sugarcane billet seed treatment. D. Wayment, H.J. Ledet, K.A. Torres, C.L. Webber, P.M. White

9:45 182. Impact of postharvest ultrasound treatment on physiology and primary metabolic profile of the tomato fruit during storage. D. Jha, J. Arul

10:05 Intermission.

10:25 183. Pesticide quantitative biodegradability-structure relationships. D. Cirovic, M. Hastings, K. Lynn, R. Rasoulpour, S. Gehen, D. Tomandl

10:45 184. Essential oil content of the seeds of Wonderful kola, African walnut and Guinea plum and their potentials on hyperlipidemic male Wistar rats. E.O.Nwaichi, J.Osuoha, M.Monanu

11:05 185. Sampling of 6-methoxybenzoxazolin-2-one (MBOA) from maize seedlings by silicone tube microextraction. H. Pedersen, K. Heinrichson, I.S. Fomsgaard
11:25 186. Effects of cutting and drying leaves of culinary herbs on contents of bioactive phytochemicals in *Perilla frutescens*. N. Kagawa, M. Henzan, H. Iguchi, M. Hanaoka
11:45 187. Antibacterial Activity of Ascorbic acid: pH effect, specific action or both? L. Panda

Section B Ernest N. Morial Convention Center
Room 217

Up in Smoke: Chemistry of Smoky Odors in Food & the Environment

A. Buettner, B. D. Guthrie, Organizers J. Beauchamp, Organizer, Presiding
8:30 Introductory Remarks.
8:50 188. Smoky, vanilla or clove-like? A. Buettner, M. Wagenstaller, K. Lorber
9:20 189. Human olfactory receptors: From systematic deorphanization to the identification of olfactory receptors activated by guaiacol and related smoky compounds. C. Pierre, M. Philippeau, A. Veithen, S. Huysseune, Y. Quesnel
9:50 190. Thermal decomposition of wood derived organic matter under specific industrial process conditions. M. Backes, G.E. Krammer, B. Voss
10:20 Intermission.
10:35 191. Incense materials: How burning lifts our spirits. A. Buettner, J. Niebler
11:05 192. Changes in aroma and sensory profile of food products smoked in the presence of a zeolite filter. J.K. Parker, X. Chua, E. Uwiduhaye, S. Lignou, H.D. Griffiths, D.A. Baines
11:35 193. Effect of sugars on vapour partition of volatile compounds of coffee beverages. P. Pittia, V. Lonzarich, D. Compagnone, L. Navarini

Heidolph North America's Cannabis Chemistry Subdivision Scholarship Symposium

Location: Hilton New Orleans Riverside Spons: CHAS Cospons: AGFD, CHAL, SCHB

WEDNESDAY AFTERNOON March 21 Section A
Ernest N. Morial Convention Center Room 216

General Papers Natural Products & Processing Chemistry

B. D. Guthrie, Organizer, Presiding
1:00 Introductory Remarks.
1:05 194. Lipids of *Silybum marianum* (L.) fruits. D. Hlangothi, K. Anthony, M.A. Saleh
1:25 195. pH, total acidity, and antioxidant activity of cold brew coffee. N.Z. Rao, M. Fuller, M. La Torre
1:45 196. Effect of pH and caffeine concentration on the hydrolysis of starch by α -amylase. F. Medina, R.J. Straw, A.N. Shaffer-Doan, A. Khan
2:05 197. Bioproducts potential of *Cladophora glomerata* Algae. W. Gao
2:25 198. Different Brazilian cold-pressed oils: Chemical composition and healthy properties. N. Cicero, R. Tardugno, A. Albergamo, D.G. Bua, V. Di

Stefano, A. Salvo, V. Mangano, A. Rotondo, G. Di Bella, G. Dugo
2:45 199. Exposure of mint plants to light emitted diode (LED) lights and their impact on essential oil composition. T. Nguyen, M.A. Saleh
3:05 Intermission.
3:25 200. Green and efficient extraction of highly crosslinked sorghum protein with preserved backbones. W. Li, B. Mu, H. Xu, L. Xu, Y. Yang
3:45 201. Chemical profiling of rare South American red nectar. S. Chakraborty, J. Jones, M. Phan, N.M. Glagovich, Y. Cai, T. Mione
4:05 202. Characterizing germinated brown rice milk beverage processes using green technologies. J. Beaulieu, S. Boue, S. Reed, K. Daigle
4:25 203. Composition and structural features of condensed tannins from Texas legumes exhibiting methane abatement activity during in vitro rumen digestion. H.D. Naumann, R. Sepela, A. Rezaire, A.E. Hagerman, L.A. Reinhardt, J.T. Robe, W. Zeller
4:45 204. Pigmented tannin by polar chromatography tandem MS for identification of candidate molecular features. A.L. Waterhouse, J.R. Cave, C.B. Lebrilla, E.A. Parker

Section B Ernest N. Morial Convention Center
Room 217

Up in Smoke: Chemistry of Smoky Odors in Food & the Environment

J. Beauchamp, B. D. Guthrie, Organizers A. Buettner, Organizer, Presiding
1:00 205. Wheat beer aroma: Which molecules are evoking the typical desired clove-like and smoky aroma? M. Granvogl, D. Langos, P.H. Schieberle
1:25 206. Characterization of smoke produced by the New Zealand native plant species, Manuka. Y. Zhang, M. Macalister, G. Eyres, J. Jones, P. Silcock
1:50 207. Uptake of smoke derived volatile phenols by grapevines and their impact on wine composition and sensory properties. R. Ristic, L. van der Hulst, K. Wilkinson
2:15 208. Fumé, flint and fire: Smoky flavors in wine. M. Herderich
2:40 Intermission.
2:55 209. Rapid determination of "smoky" odorant thresholds in red wine using sniff olfactometry (SO). T.E. Acree, D. Perry, M. Gros, A. Vigueras, A.K. Mansfield
3:20 210. Decoding the unique aroma of peaty Islay scotch single malt whiskies by means of the sensomics concept. V. Mall, P.H. Schieberle
3:45 211. Rapid quantitation of phenolic compounds in Islay whiskies by direct injection mass spectrometry. J. Beauchamp
4:10 212. Thin-Film SPME: A novel approach to the analysis of polar flavor molecules in beverages. K. Thaxton, J.R. Stuff, J. Whitecavage

**Heidolph North America's Cannabis Chemistry
Subdivision Scholarship Symposium**

Location: Hilton New Orleans Riverside Spons:
CHAS Cospons: AGFD, CHAL, SCHB

THURSDAY MORNING March 22 Section A
Ernest N. Morial Convention Center Room 216

General Papers Analysis & Methods

B. D. Guthrie, Organizer, Presiding

8:00 Introductory Remarks.

8:05 213. Optimization of reducing sugar-PMP
reactions by response surface methodology. W.

Wang, F. Chen, Y. Wang

8:25 214. Animal fat waste and cooking oil waste: A
potential source for biodiesel. M.A. Saleh

8:45 215. Stability of dietary nitrate, phenolic
compounds and enhancement of nitric oxide
precursor by different vegetable juices blending. B.

Patil, K.A. Corleto, J. Singh, G.K. Jayaprakasha

9:05 216. Physicochemical properties of Blighia
sapida (ackee) oil. J.J. Clarke

9:25 217. Chromatographic method validation for
cannabis labs: Addressing unique industry
challenges. A. Rigdon, J. Kowalski, C. Sweeney, J.
Cochran, B. Cassidy

9:45 218. Starch synthesis in soft white wheat and
the biochemical changes induced by sprouting. Y.

He, M. Tsai, F. Fang, K. Schroeder, A. Lin

10:05 Intermission.

10:25 219. Coupling of wet chemistry methods and
spectroscopic data for elucidating composition and
structure of purified condensed tannins. W. Zeller, I.
Mueller-Harvey, A.E. Hagerman

10:45 220. Omics forecasting: Predictive calculations
permit the rapid interpretation of high resolution mass
spectral data from complex mixtures. J.R. Cave, A.L.
Waterhouse

11:25 221. Optimizing espresso: Chemical and
physical considerations, and a step towards
reproducibly tasty coffee. C.H. Hendon, W. Lee, J.
Foster

11:45 222. Determination of organic acids in animal
feed using two ion chromatography methods. J. Hu,
J. Rohrer

Section B Ernest N. Morial Convention Center
Room 217

Chemistry & Applications for Cotton

S. Chang, Organizer, Presiding

8:30 Introductory Remarks.

8:35 223. Effect of pre-heating on the thermal
decomposition kinetics of cotton. S. Nam, B.D.

Condon

9:05 224. Innovative technologies development for
anti-flammable cotton fabrics at USDA. S. Chang,
B.D. Condon, J. Smith

9:35 225. Correlating metals present in soil and
cotton fiber. C.A. Fortier

10:05 Intermission.

10:25 226. Cytotoxicity and gene expression
regulation of minor components from cottonseeds in
mouse RAW macrophages. H. Cao, K.

Sethumadhavan

10:55 227. Examination of cotton fiber bundle
properties using an infrared focal plane array
detector. M. Santiago, T. Von Hoven, D. Hinchliffe

THURSDAY AFTERNOON March 22 Section A
Ernest N. Morial Convention Cer Rm 216

General Papers

B. D. Guthrie, Organizer, Presiding

1:00 Introductory Remarks.

1:05 228. ANOVA for unbalanced data: Using
spreadsheets to evaluate sums of squares and
comparisons of means. T. Klasson

1:25 229. Effect of whey protein/kappa- or iota-
carrageenan complexes on the stability of cod liver
oil-in-water emulsions. M. Krempel, H. Moss, H.
Khouryieh

1:45 230. Interactions between polysaccharides and
flavonoids: Potential contribution to microstructure in
wine. T. Goulette, E.A. Decker, H. Xiao, H. Chong,
M.T. Cleary

2:05 231. Determination of flavonoids, alkaloids and
saponins in Solanum scabrum berries using
LC/UV/MS. B. Yuan, D. Byrnes, J. Simon, Q. Wu

2:25 232. The quantification of the food water and
energy nexus and cost analysis associated with
resource consumption and reduction within a milk
processing facility. C. Adams

2:45 Intermission.

3:05 233. Preparation and characterization of
quercetin-loaded electrospun fiber mat and its colon-
specific release property. P. Wen, M. Zong, H. Wu

3:25 234. Exploring the potential of a sustainable
crop for gluten-free foods market: A protein
digestibility study. P. Gulati, D. Rose

3:45 235. Storage conditions affect the untargeted
chemical profile and bioactivity of black raspberry
nectar intended for use in clinical trials. M.D.
Teegarden, T.J. Knobloch, C.M. Weghorst, J.

Cooperstone, D.G. Peterson

4:05 236. Inhibitory effect of aqueous extract of the
potato peel waste on starch digestive enzymes. C.
Chen, S. McGeehan, M. Thornton, A. Lin

mark August 19-23, 2018 on your calendar for the
256th ACS National Meeting in Boston

AGFD

CORNUCOPIA



CORNUCOPIA

Lined area for writing the schedule of activities.

Schedule of AGFD Technical, Business, Planning, and Social Activities

Sun 12:00-1:00pm
Sun 5:30-8:00pm
Mon 12:00-1:00pm
Mon 5:30-8:30pm
Mon afternoon
Tues 10:30-1:00pm
Tues 6:00-8:00pm

Special Topics
AGFD Posters & Reception
Future Programs
Executive Committee Meeting
AGFD Undergraduate Research Posters
C4 - Communicating Chemistry Creole Cooking
AGFD Chair's Reception

Convention Center room 218
Convention Center Hall E
Convention Center room 218
Convention Center room 218
Convention Center
Dickie Brennan's Steakhouse – 716 Iberville St.
Dickie Brennan's Bourbon House – 144 Bourbon St.