



CORNUCOPIA

including the AGFD program for the
269th American Chemical Society (virtual & live) National Meeting on

March 23 - 27, 2025

in

SAN DIEGO

Jason Soares, Elizabeth Kreger & Coralia Osorio Roa
Program Chairs

Going to San Diego?

Join the AGFD Chair's Reception at Joe's Crab Shack, 525 E Harbor Drive
Tuesday, March 25 from 6:00-8:00 pm

10 minute walking directions from the Marriott Marquis – exit the Marriott and head toward the street (South Embarcadero) that borders the waterfront/marina. Once facing the marina continue left along South Embarcadero. At the end of the marina turn right into the parking lot along Marina Park Way. Joe's Crab Shack is on the opposite side of the parking lot.

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Visit our website - www.agfoodchem.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

I am pleased to be given the opportunity to serve as AGFD Division Chair. With honor I accepted this responsibility and will do my best to serve it with dignity during the year. I am taking over the role from Jason Soares, our past Chair, who has been a kind, patient and knowledgeable leader who I couldn't be more grateful for. The rest of the Executive Committee has been absolutely integral for this smooth transition and making sure every aspect of the ACS meetings and the AGFD run effectively and efficiently. Special thanks to Alyson Mitchell, Kathryn Deibler, Mike Morello, Youngmok Kim, Carl Frey, Steve Toth, Michael Tunick and Jonathan Beauchamp for supporting me and the AGFD.

I want to briefly address the historical time we are going through in the world and my sadness for how it affects the scientific community. Science is not a belief. It is a trust in reproducible data, shared out to achieve greater knowledge for us to continually improve the world in which we live. Science is nothing if it is not communicated. ACS meetings are a safe space in which us scientists communicate and discuss our data to our great minded peers. However, cutting off communication will halt the advancement of science whether that is from travel bans and inability to attend conference OR ceasing the cooperation with intergovernmental scientific agencies. My hope is that science and the scientific community rise above politics.

Thank you to all the AGFD members who continue to support the Division by attending and participating in our national meeting program. I especially appreciate the symposium organizers and presiders who continue to go above and beyond to provide the AGFD community with relevant and emerging research topics highlighting the latest state-of-the-art research and capabilities in the field of agriculture and food chemistry. These include sessions topics that align the AGFD sub-divisions: Food Bioengineering, Flavor, Food Safety, Functional Foods & Natural Products, Nutrition and Gut Microbiome, Sustainability and Green Technology, and Agriceuticals. Big Thank You to all the presenters, from whom we cannot continue to success without your invaluable contribution and your willingness and bravery to share your research with your AGFD and greater ACS community members.

Before I go into the details of this Spring 2025 meeting, I will highlight the success we achieved in 2024. Our Fall meeting in Denver was very exciting with 15 technical symposia comprising 33 total sessions with over 400 oral presentations and posters. This included the topics: Waste Upcycling, Indoor Farming & Sustainable Agriculture, Processing & Storage Induced Toxins, Bioproducts from Biomass: Renewable Chemicals & Polymers, Whole Grains Bioactives & Human Health, Sustainable Agriceuticals, Elevating Sustainability & Greentech in Agriculture & Plant-Based Foods, and Microbiome Research Consortium. Special sessions included Virtual Graduate Students Symposium in Asia-Pacific Region and Honoring Professor Chi-Tang Ho on the Occasion of His 80th Birth Year. Lastly, at the Fall National Meeting we honored dedicated AGFD members that have provided incredible contributions to agriculture and food chemistry. Lastly, we congratulated Dr. Tara H. McHugh, ARS-USDA, for winning the most honored Award for the Advancement of Application of Agricultural and Food Chemistry, Dr. Joonhyuk Suh, University of Georgia, for the Young Scientist Award, and myself, Dr. Elizabeth R. Kreger, for the Young Industrial Scientist Award.

The AGFD Spring 2025 program has 10 technical symposia, with 3 aligning with ACS's efforts for more co-sponsored programming. Food Security: Tackling World Hunger CCC: Highlighting Chemistry from Multiple Divisions: Advancement in Crop Protection and Nutrient Analysis, Microbial Food Safety: Emerging Technologies for Detection, Intervention, and Antimicrobial Packaging of Foodborne Pathogens and James Seiber Memorial Symposia. Other exciting symposia include; Breeding for Flavor Sensory Quality and Sustainability of Fresh and Fresh-Cut Fruits and Vegetables, Applying Mass Spectrometry and NMR Techniques in the Study of Plant and Food Metabolomics, Chemistry of Alcoholic Beverages, Extraction, Recombinant Production, and Function of Proteins of Food Safety and Food Manufacturing Importance, Flavor Preferences of Cats and Dogs, and General Papers sessions highlighting topics in Food Safety and Agriculture, Nutrition Topics, Protein Topics & Quality/Processing/Sustainability.

I close this message with gratitude for the AGFD and the greater ACS. I greatly appreciate the community that is provided as a way to connect scientifically but also just networking to make friends. I wish you an enjoyable meeting here in San Diego! I hope to see you at the symposia and at the Chair's Reception on Tuesday where we can enjoy the company of our peers and new friends and congratulate each other on all the hard work each of us does each day.

FUTURE PROGRAMS

WASHINGTON D.C. August 17 – 21, 2025

*** Innovations in Chemistry ***

ACS Microbiome Consortium: Harnessing the Power of Agricultural Chemistry to Strategically Modify the Gut Ecosystem Jason Soares jason.w.soares.civ@army.mil Karley Mahalak Karley.mahalak@usda.gov Jenni Firman Jenni.Firman@usda.gov Laurel Doherty laurel.a.doherty.civ@army.mil Ida Pantoja Feliciano De Goodf ida.g.pantojafeliciano.civ@army.mil Tom Wang Tom.Wang@usda.gov Courtney Christopher Cchristopher@utk.edu

Advances in Food Technology for a Sustainable Future Anna Rulka ulkaa@rsc.org Audra Taylor taylorau@rsc.org

AGFD Awards - Young Scientist, Young Industrial Scientist, JAFC Best Paper Award and Sterling B Hendricks Memorial Lecture Youngmok Kim youngmok.kim@finlays.net Bhimanagouda Patil Bhimanagouda.Patil@ag.tamu.edu Thomas Hofmann jafc@jafc.acs.org William King WKing@acs-i.org Michael Appell Michael.appell@gmail.com Bosoon Park bosoon.park@ars.usda.gov Elizabeth Kreger Elizabeth.Kreger@sensient.com

Agnes Rimando International Student Symposium Roberta Tardugno roberta.tardugno@uniba.it Michael Tunick mht39@drexel.edu

Award for Advancement of Application of Agricultural and Food Chemistry Michael Morello mjmorello226@gmail.com Elizabeth Kreger Elizabeth.Kreger@sensient.com

Allergen Detection Limits Lauren Jackson lauren.jackson@fda.hhs.gov

Application of Renewable Chemicals and Polymers in Agriculture Jinwen Zhang jwzhang@wsu.edu Long Jiang long.jiang@ndsu.edu

Innovations in Natural Polymer Science for Sustainable Agriculture and Food Security Michael Appell michael.appell@gmail.com Lingyun Chen lingyun1@ualberta.ca Lucy Yu lyu5@umd.edu

Chemistry of Alcoholic Beverages Nick Flynn nflynn@wtamu.edu

Chemistry of Flavor Compounds in Quality, Safety and Sensory Properties of Foods and Food Products Joonhyuk Suh J.Suh@uga.edu Jeehye Sung jeehye@anu.ac.kr

Food Fraud: Chemistry Strategies for Detecting and Reducing Food Crimes Neil Da Costa neil.dacosta@iff.com

Micro/Nanoplastics in Food: Prevalence, Detection, and Toxicity Changqing Wu changwu@udel.edu Xuetong Fan Xuetong.Fan@usda.gov Timothy Duncan timothy.duncan@fda.hhs.gov Sadia Khan sadia.khan@fda.hhs.gov

Nutraceutical and Functional Food: Emerging Techniques for Characterization and Bioavailability Analysis Michael Appell michael.appell@gmail.com Lingyun Chen lingyun1@ualberta.ca Zhuohong (Kenny) Xie KYX@usp.org Xiaohong Sun xiaohong.sun@dal.ca

Sustainable Agriceuticals Linshu Liu Linshu.liu@usda.gov Yuzhu Zhang Yuzhu.zhang@usda.gov Ying Wu ywu@Tnstate.edu Wally Yokoyama wally.yokoyama@usda.gov Hyunsook Kim Hyunsk15@hanyang.ae.kr

Tackling World Hunger & Food Security Reducing Food Waste - Food Security CCC: Highlighting Chemistry from Multiple Divisions Christy Haynes chaynes@umn.edu Heidi Irrig heidi.irrig@syngenta.com Qing Li qingl@hawaii.edu Slawomir Lomnicki slomni1@lsu.edu Michael Morello mjmorello226@gmail.com Zhuohong (Kenny) Xie KYX@usp.org Michael Tunick mht39@drexel.edu Jonathan M. Deutsch jdeutsch@drexel.edu

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Using Artificial Intelligence to Improve Agriculture and Food Systems Yu Wang Yu.Wang@ufl.edu Boce Zhang boce.zhang@ufl.edu Po-Yen Chen checp@umd.edu

Virtual Graduate Students Symposium in Asia-Pacific Region on Agricultural & Food Chemistry Xiaohong Sun xiaohong.sun@dal.ca Joshua Blair J_Blair@acs.org Laura McConnell laura.mcconnell@bayer.com

Whole Grains Bioactives & Human Health Shengmin Sang ssang@ncat.edu

Withycombe-Charalambous Graduate Student Symposium Kathryn Deibler kdd3@cornell.edu Elizabeth Kreger Elizabeth.Kreger@sensient.com Coralia Osorio Roa cosorior@unal.edu.co

General Papers Elizabeth Kreger Elizabeth.Kreger@sensient.com Coralia Osorio Roa cosorior@unal.edu.co

General Posters and Undergraduate Poster Competition Kathryn Deibler kdd3@cornell.edu Elizabeth Kreger Elizabeth.Kreger@sensient.com Coralia Osorio Roa cosorior@unal.edu.co

Innovative Prog: Food Security George Cobb Laura McConnell

ATLANTA March 22 – 26, 2026

***** Advances in Genetically Modified Crops *****

Chemistry and Health of Ultra-Processed Foods Fereidoon Shahidi fshahidi@mun.ca Roberta Tardugno roberta.tardugno@uniba.it

Citrus Flavor Xiaofen Du xdu@twu.edu Yu Fang yufang@coca-cola.com

Flavor Symposium Workshop - ACS Thomas H. Parilment Award in Flavor Chemistry Michael Morello mjmorello226@gmail.com

Food Flavor and Innovation, Analysis, Application, Generation Keith Cadwallader cadwlldr@illinois.edu Steven Toth Steven.Toth@iff.com Mike Morello mjmorello226@gmail.com Xiaofen Du xdu@twu.edu

Food Ingredients in Cosmetic Applications Roberta Tardugno roberta.tardugno@uniba.it Elizabeth Kreger elizabeth.kreger@sensient.com

Human Milk Oligosaccharides (HMOs): Synthesis and Gut Health

Withycombe-Charalambous Graduate Student Symposium

CHICAGO August 23-27, 2026

Bioproduct from Biomass Majher I. Sarker majher.sarker@usda.gov Brajendra Sharma brajendra.sharma@usda.gov Yadav Madhav madhav.yadav@usda.gov Helen Ngo helen.ngo@usda.gov

Climate-Smart Foods: Boosting Nutrition, Flavor, Resiliency and Consumer Acceptance Bhimu Patil b-patil@tamu.edu Deepakkumar Jha Vikas Dadwal

3rd Global Symposium on Chemistry and Biological Effects of Maple Food Products Hang Ma hang_ma@uri.edu Navindra Seeram nseeram@uri.edu

Progress Over the Last 100 years in Agricultural and Food Chemistry Michael Tunick mhtunick@gmail.com

All Award Symposia

OTHER SYMPOSIA OF INTEREST

Pacificchem - Honolulu, Hawaii, December 15-20, 2025, pacificchem.org; <https://pacificchem.org/scientific-program/symposium-guidelines/>

From the 4th International Flavor and Fragrance Conference



The 4th IFFC took place on Nov. 4-7, 2024 in Auckland City, New Zealand. Previous IFFC events took place in Cartagena, Colombia, Wuxi, China, and Vina del Mar, Chil. AGFD sponsors the IFFC which Michael Qian (Oregon State University) and Graham Eyres (Univ. of Otago) co-chaired. Other organizers included Gary

Reineccius (Univ. of Minnesota) and Fereidoon Shahidi (Memorial Univ. of Newfoundland). Wuliangye Yibin Co. served as principal sponsor and strategic partner. The conference ended with poster competition awards sponsored by Gerstel Co. and Partners. The scientific committee awarded 6 prize winners, pictured above, flanked by Professors Eyres (left) and Qian (right). *photo/text credit, M. Qian*

AWARD NEWS

Chi-Tang Ho



recipient of a 2024 AGFD Exemplary Leadership Award

recognizing his substantial and extended service to AGFD, including -

- Member since 1982 and Division Chair 1996
- AGFD Flavor Subdivision: 1991
- Alternate Councilor: 2003-2010
- National Meeting Symposia: 23 since 1990
- Symposium Series Books: 20
- JAFAC Editorial Advisory Board: 1995 -2008
- JAFAC Associate Editor: 2009 – Present
- Student Award Coordinator: 1999 -2019
- AGFD Fellow: 1988 and ACS Fellow: 2011
- AGFD Distinguished Service Award: 2000
- 2005 Advancement of Application of Ag & Food Chemistry Award

Fereidoon Shahidi



recipient of a 2024 AGFD Exemplary Leadership Award

recognizing his substantial and extended service to AGFD, including -

- Member since 1987 and Division Chair 2002
- Chair Flavor Subdivision: 2000
- Alternate Councilor: 2010-2016
- National Meeting Symposia: 33 since 1990
- Symposium Series Books: 10
- JAFAC Editorial Advisory Board: 2003 -2011
- AGFD Fellow Award Coordinator: 2003 -date
- AGFD Fellow: 1994 and ACS Fellow: 2010
- AGFD Distinguished Service Award: 2008
- 2007 Advancement of Application of Ag & Food Chemistry Award
- Sterling B. Hendricks Memorial Lecture: 2021

Recognize an AGFD Colleague with an Award

AGFD and ACS awards programs, summarized below, provide many opportunities to recognize a colleague for technical and organizational excellence. Find more details regarding each award – purpose, eligibility, prize, nomination deadline, application form - on the Division's awards webpage - <https://www.agfoodchem.org/programs-1>

Awards described on the web-page and in the web-edition of this *Cornucopia* that includes abstracts -

Advancement of Application of Agricultural and Food Chemistry (sponsored by International Flavors & Fragrances, Inc.) - recognizes and encourages outstanding contributions to pure and/or applied agricultural and food chemistry. The winner receives \$3000 and traveling expenses to the ACS Fall Meeting.

Young Scientist - recognizes outstanding scientific contributions of scientists early in their careers to the field of agricultural and food chemistry. The winner receives \$1000 and traveling expenses to the ACS Fall Meeting.

Young Industrial Scientist – recognizes contributions of junior industrial scientists to commercial fields of agricultural and food chemistry. The winner receives up to \$1000 in traveling expenses to the ACS Fall Meeting.

AGFD Fellow - recognizes outstanding scientific contributions of AGFD members (w/>10 years of service) to the field of agricultural and food chemistry.

Roy Teranishi Graduate Fellowship in Food Chemistry – provides \$2500 for research expenses to a student with an outstanding grade point average and showing promise of an excellent graduate research career.

Withycombe–Charalambous Excellence in Graduate Research in Agricultural or Food Chemistry – a competition designed to showcase the research talents of up to 6 graduate degree candidates to prospective employers. Participants receive up to \$1000 in travel expenses and a chance to win an award of \$500, \$250 or \$100.

Undergraduate Poster Competition - showcases the research talents of undergraduate students in a professional forum and promotes their continuance of education in food and agricultural chemistry. Participants receive up to \$1000 in travel expenses and a chance to win an award of \$500, \$250 or \$100.

Distinguished Service to AGFD - recognizes substantial and sustained service to the Division.

Exemplary Leadership - recognizes substantial and extended (>25 years) service to AGFD.

Books – recognizes editors whose books (published under division auspices) achieve high sales volume, providing a royalty income to subsidize future Division Symposia.

Sterling B. Hendricks Memorial Lectureship - recognizes scientists who have made outstanding contributions to the chemical science of agriculture. The winner presents a lecture at the ACS Fall Meeting and receives an honorarium of \$2000, a bronze medallion and travel expenses.

Kenneth A. Spencer - recognizes work in education, industry or research that meritoriously contributed to the advancement of agricultural and food chemistry. The award consists of a medal and an honorarium of \$6,000.

ACS Fellow - recognizes ACS members for their outstanding achievements in and contributions to science, the profession and the Society.

JAFC Research Article of the Year Lectureship – recognizes authors of a particularly impactful JAFC article published within the last year.

Thomas H. Parliament Advances in Flavor Chemistry – recognizes significant contributions to the advancement of flavor chemistry with an emphasis on the aroma aspects. The winner receives a \$20,000 cash award.

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 -

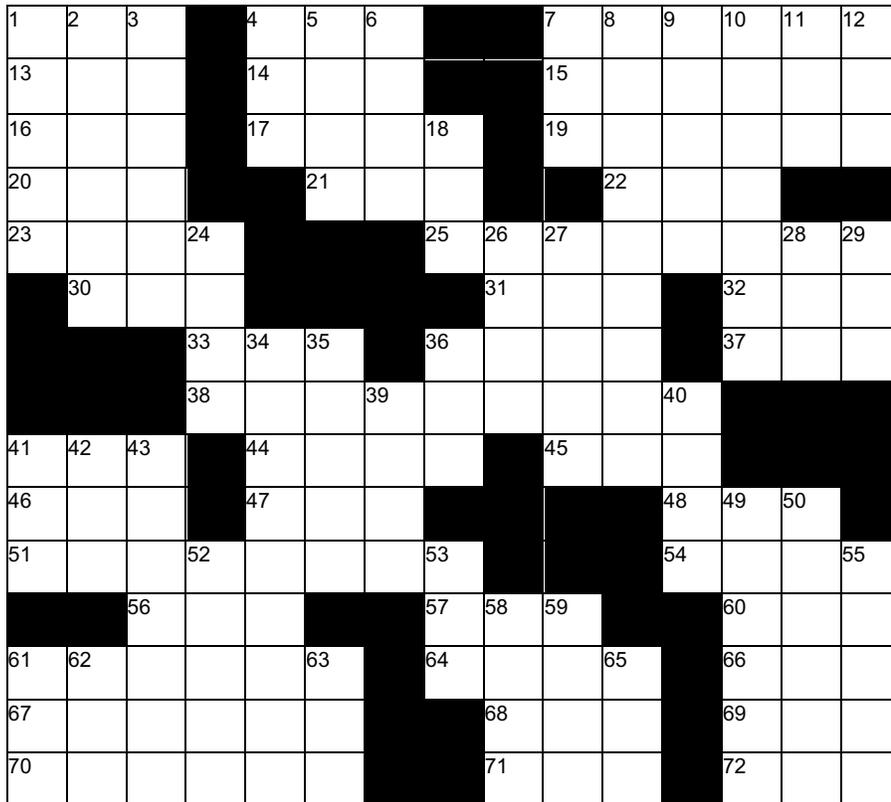
- organizing symposia/workshops on agricultural/food chemistry at ACS national meetings and other venues
- publishing proceedings of AGFD symposia
- publishing the *Cornucopia* newsletter
- updating members several times a year via e-mail blasts
- hosting social and networking gatherings at ACS national 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

At ACS National Meetings you can discuss division activities at the AGFD information table located near the AGFD technical session rooms. Join ~2100 AGFD members via the application form (below) or on-line at www.agfoodchem.org or www.acs.org (click on [Communities](#), [Technical Divisions](#), [Technical Division List](#)) or call ACS (800)333-9511 (in US) or 616-447-3776 (outside US). Payment by Visa/MasterCard or AmEx.

Check out AGFD on You Tube: <https://www.youtube.com/watch?v=CyBMAAnOuFKE>

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

ACROSS & DOWN in SAN DIEGO TOWN



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

Kudos to Fall 2024

Cornucopia puzzle solver

Chelsea Harrod

of Atlanta

ACROSS

- 1 Type of noisy shoe
4 Budd__ or nud__
7 E.g. triangle & circle
13 Genetic info messenger
14 Congo red or eosin
15 North Africa desert
16 Lexicon of 600K words
17 You can't fool me,
I'm __ you
19 Ski trail vehicle
20 Toddler multi-vaccine
21 Sanka coffee: de-__
22 551 in old Rome
23 Pizzas, to some
25 With great power
30 Crucible residue, often
31 Largest US labor union
32 Be with you __ minute!
33 US federal tax agency
36 Contented feline sound
37 Corn ear core
38 Home of 3 DOWN
41 __, you're it!

44 Uttered

- 45 Shorthand for 12/31
of any year
46 Chicken __ King
47 Savings plan for many
48 1st aid pro
51 Road trip break area
54 Pre-Euro Roman currency
56 Illuminated
57 Gator__
60 *The Da Vinci Code*
author: __ Brown
61 Black sheep call
64 Potato chip powerhouse
66 You can't __'em all
67 Under consideration
68 Golf ball support
69 Chicken __ king
70 San Juan shoe
71 Enzyme suffix
72 Luxury French designer

DOWN

- 1 Walk with a heavy tread
2 Low red blood cell count
3 San Diego MLB players
4 Altar declaration
5 Work in harmony
6 Formerly The Facebook Co.
7 Trouble sound for bike rider
8 Deliver in person
9 Golf ace: __ in one
10 San Diego water boundary
11 Significant history period
12 Took a chair
18 Light switch option
24 Sloop or schooner
26 Where TV's *The Jeffersons*
were moving
27 Vied again for office
28 Game with SKIP card
29 Chemist workplace, often
34 Prone to not change
35 Begin, commence
36 I-__ or __-cast
39 Roman 'Hi!'

40 Lowest timber of 24 DOWN

- 41 Cate Blanchette starring role
42 Hoppy fermented brew
43 San Diego historic district
49 San Diego aircraft carrier/
museum: USS __
50 Roy Rogers' *Happy __ to You*
52 Shinbone
53 Friend, buddy
55 Historical record
58 Lab notebook contents, often
59 Vision organs
61 'That's show __!'
62 *Knives Out* actress
__ de Armas
63 *Much __ About Nothing*
65 Observe, date, understand

AGFD OFFICER & COMMITTEE LEADERSHIP ROSTER

Chair - Serves 1 year. Presides over Division meetings/appoints committees
Liz Kreger Sensient Flavors & Extracts
Elizabeth.Kreger@sensient.com

Chair-Elect - Serves 1 year. Substitutes for Chair as needed. Organizes technical programs at national meetings.
Coralia Osorio Roa UNAL
cosorior@unal.edu.co

Vice-Chair - Serves 1 year. Assists Chair-elect. Develops future technical programs. Karley Mahalak USDA-ARS
karley.mahalak@usda.gov

Secretary - Responsible for Division correspondence and meeting minutes.
Alyson Mitchell
University of California, Davis
aemitchell@ucdavis.edu

Treasurer - Responsible for Division finances.
Stephen Toth III
International Flavors & Fragrances, Inc.
R&D Union Beach NJ
stephen.toth@iff.com

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

Councilors - Represent Division for 3 years on ACS council.
Alyson Mitchell (thru '26)
aemitchell@ucdavis.edu
Lauren Jackson (thru '26)
lauren.jackson@fda.hhs.gov
Michael Tunick (thru '27)
mht39@drexel.edu

Website Editor - Maintains web site.
Michael Appell
michael.appell@ars.usda.gov

Student Activities – Attract/retain graduate/undergraduate student membs.
Ethan Lee (thru '27) elee1212@umd.edu
Jiayi Hang (thru '26) jhang1@ualberta.ca

Nominations - Develops officer slate. Served by immediate past chair. Jason W. Soares jason.w.soares.civ@army.mil

Finance - Monitors Div. finances. Served by immediate past chair. Jason W. Soares jason.w.soares.civ@army.mil

Hospitality - Organizes receptions and banquets. Alyson Mitchell
aemitchell@ucdavis.edu

Alternate Councilors - Substitute for Councilors. Serve 3 years.

Kathryn Deibler (thru '27)
kdd3@cornell.edu
Michael Qian (thru '27)
Michael.qian@oregonstate.edu
Brian Guthrie (thru '26)
Brian_Guthrie@cargill.com

At-Large Executive Committee

Members - Assist in Div. management. Serve 3 years.

Jane Leland (thru '26)
JLelandEnterprises@gmail.com
Robert McGorin (thru '26)
robert.mcgorin@oregonstate.edu
Keith Cadwallader
cadwldr@illinois.edu (thru '27)
Jonathan Beauchamp (thru '27)
jonathan.beauchamp@ivv.fraunhofer.de

Awards – Oversee awards process.

Chair Michael Morello
mjmorello226@gmail.com
AGFD Fellow Awards
Fereidoon Shahidi fshahidi@mun.ca
Young Scientist Award
Youngmok Kim
youngmok.kim@finlays.net
Young Industrial Scientist Award
Bhimanagouda (Bhimu) Patil
b-patil@tamu.edu
AGFD Distinguished Service Award
Michael Tunick mht39@drexel.edu
Roy Teranishi Graduate Fellowship
Liangli (Lucy) Yu lyu5@umd.edu
Grad/Undergrad Student Awards
Kathryn Deibler kdd3@cornell.edu

Multidisciplinary Program Planner

Helps coordinate nat'l mtg programs
Neil Da Costa International Flavors & Fragrances, Inc. neil.dacosta@iff.com

Membership – Recruits/retains members. Michael Qian
michael.qian@oregonstate.edu

Agricultural Sub.Div.

Chair Yuzhu Zhang
yuzhu.zhang@usda.gov
Chair-elect Ying Wu ywu@Tnstate.edu
Vice-chair Bailiang Li
15846092362@163.com
Secretary
Songtao Li lisongtao@vip.126.com

Food Bioengineering Sub.Div.

Chair Hongsik Hwang
hongsik.hwang@usda.gov
Chair-elect Changqing Wu,
changwu@udel.edu
Vice-chair Jinwen Zhang
jwzhang@wsu.edu
Secretary Hye-Seon Kim
hyeseon.kim@usda.gov

Flavor Sub.Div.

Chair Joonhyuk Suh J.Suh@uga.edu
Chair-elect Yun Yin yunyin2@vt.edu
Vice-chair Yu Fang
yufang@coca-cola.com
Secretary Clare Jiang
clare.y.jianf@gmail.com

Food Safety Sub.Div.

Chair Boyan Gao gaoboyan@sjtu.edu.cn
Chair-elect Vivian Wu
vivian.wu@usda.gov
Vice-chair Yanhong Liu
Yanhong.liu@usda.gov
Secretary Jinsong Feng
jinsongf@zju.edu.cn

Functional Food/Nat Product SubDiv

Chair Yingdong Zhu yzhu1@ncat.edu
Chair-elect Khizar Hayat
khizaraura@gmail.com
Vice-chair Xiaohong Sun
Xiaohong.sun@dal.ca
Secretary Yanfang Li yanfang.li@usda.gov

Nutrition & Gut Microbiome Sub.Div.

Chair Ida Pantoja-Feliciano
ida.g.pantojafeliciano.civ@mail.mil
Chair-elect Tom Wang
Tom.wang@usda.gov
Vice-chair Jenni Firrman
Jenni.firrman@usda.gov
Secretary Jianghao Sun
jianghao.sun@usda.gov

Sustainability/Green Tech. Sub.Div.

Chair Lingyun Chen
lingyun.chen@ualberta.ca
Chair-elect Omowunmi "Wunmi" Sadik
sadik@njit.edu
Vice-chair Yi-Shu Tu
georgetu@gmail.com
Secretary Yixiang Wang
yixiang.wang.mcgill.ca

Public Relations – Publicizes Division.

Alyson Mitchell aemitchell@ucdavis.edu

AGFD Executive Committee Meeting Minutes

Monday, August 19 5:00- 8:00 PM
Colorado Convention Center, Room 608

Attendees: Jason Soares, Liz Kreger, Coralia Osorio Roa, Alyson Mitchell, Elyse Dorie, Mike Tunick, Xiaofen Du, Steven Toth, Brian Guthrie, Mike Morello, Lauren Jackson, Mike Appell, Karley Mahalak, Lucy Yu, Fereidoon Shahidi, Keith Cadwallader, Bhimu Patel, LinShu Liu

AGFD Chair Jason Soares called the meeting to order at 5:08 PM (MDT). The **Minutes** of the previous Executive Committee meeting were approved with no changes and are published in the Fall 2024 *Cornucopia*.

Steve Toth gave the **Treasurer's Report**. Revenue for the year was \$54,948 and expenditures were \$96,619. The Division has \$1,107,645 in total assets and is financially healthy. Mike Morello presented a motion to create a bank account to accommodate electronic fund transfers at meetings. Mike Appell seconded the motion. The motion passed. Steve Toth will investigate opening a separate bank account and report findings to the Executive Committee. The Spring 2023 meeting in New Orleans was expensive (~\$61,000). Part of the increased cost (~\$11,000) was associated with the AGFD Communicating Culinary Chemistry Competition (C4). Continuing support for this competition was discussed as the competition received only 3 submissions from two schools. The Executive Committee decided to wait until the next request to hold a C4 competition to discuss continued funding. A budget of \$50,000 was set and approved by the Executive Committee for the Spring 2025 meeting in San Diego. An additional budget was approved at a rate of \$333/session in support of the Pacificchem meeting to be held December 2024. Kathryn Deibler requested increasing the swag budget for the 2025 Spring meeting from \$2,500 to \$3,000. The request was discussed and approved. The Executive Committee suggested that the swag be brightly colored items that clearly displayed the AGFD logo that members could wear or carry to help advertise the Division. Ball caps with AGFD logo were suggested for the upcoming meeting in San Diego. Mike Morello suggested adding pins to the swag handed out at the meetings. A request to add a general sticker with AGFD logo and badge ribbons be included in orders for each meeting.

In the **Program Report**, Liz Kreger indicated that there are 32 in-person and 4 virtual sessions being presented in Denver. The poster session was smaller than usual with only 40 posters being presented due to expansion of General oral sessions. Of these, 9 were withdrawn and there were several no-shows. ACS is encouraging in-room and digital posters for future Fall meetings. Managing the logistics of digital and in-room poster presentations was discussed. Mike Appell suggested encouraging poster presenters to submit webinars for posting on the AGFD YouTube webpage. Coralia Osorio Roa and Liz Kreger will contact ACS to learn more about the various platforms and logistical support offered by ACS. Alyson Mitchell suggested forming a committee to review the posters at the Spring 2025 meeting with the goal of identifying posters for webinar development. Mike Tunick and Brian Guthrie will head this committee. Liz Kreger will investigate setting up digital or flash presentations in conjunction with the Food Security CCC symposia in Fall 2025. There are at least 21 symposia proposed for the Spring 2025 National Meeting. It was noted that the number of hybrid sessions for the Spring meeting is limited to one as ACS is moving back to in-person programming.

Subdivision Reports: Daxi Ren gave the **Agriceuticals Subdivision** report on behalf of Hyunsook Kim and indicated that although there are no symposia being organized for the Spring 2025 meeting, one is planned for the Fall 2025 meeting. Jason Soares reminded everyone that the symposia need to be planned well ahead. For the Fall meeting, the symposia deadline is the December prior to the meeting, and for Spring meeting the symposia deadline is the July prior to the meeting. Xiaofen Du gave the **Flavor Subdivision** report and indicated that in Spring 2024 two symposia were organized and featured a total of 11 presenters. One symposium with two sessions was organized for the Fall 2024 meeting and one symposium will be organized for the Fall 2025 meeting. No reports were given for the **Food Bioengineering and Food Safety Subdivisions**. Kenny Xie indicated, via email, that the **Functional Foods & Natural Products Subdivision** programmed two symposia at the Fall 2024 meeting in conjunction with the CCC and that one was hosted by AGRO. Jason Soares gave the report on behalf of Laurel Doherty for the **Nutrition & Gut Microbiome Subdivision**. This Subdivision is holding 5 sessions at the Fall 2024 meeting in conjunction with the CCC Gut Microbiome Consortium grant. The **Sustainability & Green Technology Subdivision** report was given by Yufeng Tseng. The subdivision programmed 3 sessions at the Fall 2024 meeting and is working with POLY on

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developing a CCC grant proposal on natural polymers for Fall 2025. All subdivisions have secretaries nominated for incoming positions. Jason Soares will send out an email reminder to all subdivision chairs regarding their duties with respect to programming and reporting. This information is in the communications manual. Subdivisions are not aligned with the meetings and participation of subdivision leaders is low.

The **Awards Committee Report** was given by Michael Morello. All awards winners are posted in the Fall 2024 Cornucopia with exception of the *Exemplary Service Award*. This award was given to Chi-Tang Ho for his over 25 years of service to the Division. Mike asked for ACS Fellow nominations and reminded members that a candidate must have service to both the profession as well as service to ACS (Division or Local Sections) to be considered for this award. Mike Morello indicated that he and Bob McGorrin were active in helping secure the Thomas H. Parliment Award. This national award will be given through ACS and will have a \$20,000 prize. The first award will be given at the Spring 2026 meeting. The committee discussed changing the name of the “General Papers” symposium to something more appealing. There was agreement and a new name will be proposed for consideration at the Spring meeting. Mike Morello also indicated that we may want to clarify what the Division considers “mid-career” for the AGFD Fellow Award as this has caused some confusion with applicants. The awards committee will review the language of all Division awards and update the AGFD

Fellow Award requirement to increase division membership to 10 years as part of the definition of “mid-career”. Kathryn Deibler indicated via email that there were only two entries in our undergraduate poster competition. Kathryn will be consulted on new approaches to engage more students, such as awarding the best undergraduate poster and graduate poster, in lieu of holding a poster competition.

The **AGFD Past Leaders Committee** report was given by Michael Appell. LinShu founded this committee in 2023 to help maintain Divisional knowledge and to provide guidance to new leadership when needed. It is composed of past AGFD leaders who are no longer on the Executive Committee but want to remain active in AGFD leadership. The committee will meet during the Fall 2024 meeting and during the year via Zoom.

The **Student Committee Report** was given by Elyse Doria who indicated that she organized a tour of the Hammond Candy Factory in conjunction with the Fall 2024 meeting, which was attended by 5 students. Elyse indicated that there were about 12 students who came to the Student Leadership lunch. The committee suggested changing the name from Student Leadership Lunch to Student Networking Lunch. All approved this name change.

The 4th **International Flavor and Fragrance Conference** in New Zealand will be held this year in November. Michael Qian is organizing this meeting. Coralia Osorio Roa is organizing the next IFFC to be held in Panama. Coralia asked for an official letter from the Division to indicate the support for this effort. It was determined that this letter needs to come from ACS.

The **Councilors Report** was given by Michael Tunick and Alyson Mitchell. Michael indicated that council plans to increase the councilors to 450 but keep the 80:20 split between Local Section and Divisions. Councilors will vote on a petition aimed at allowing all ACS members to have global representation on Council. This petition creates *Zones* for election of new Councilors globally. This petition does not change processes for authorizing Councilors from Local Sections or Division, or the ability of an ACS member to join a Section, or a Local Section to annex territory. Currently 80 Councilors are elected by Local Section and 20 Councilors are elected by Divisions. The formula will change to 80 Councilors elected by Local Section + Councilors elected by Zones and 20 Councilors elected by Divisions.

The **Nominations Report** was given by Jason Soares. The nomination of Karley Mahalak as the 2025 Vice-Chair was approved. The Division approved the nomination of Jonathan Beauchamp, Keith Cadwallader as At-Large EXCOM members, Michael Tunick as Councilor, and Michael Qian, Kathryn Deibler and Yu Wang as Alternative Councilors. The only position not filled is the Student Representative to AGFD. Applications for this position will be due in late Fall. The new representative will be selected in December and will be expected to attend the Spring 2025 meeting.

Cornucopia editor Carl Frey reported that the ACS Webmaster posted *Cornucopia* to the website one week before the meeting. One hundred copies of the short (no abstracts) version were sent to the Secretary for distribution in Denver. The issue is also now on the AGFD website. Thanks to all that contributed content.

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The **Hospitality/Public Relations Report** was given by Alyson Mitchell who indicated that 65 tickets were made available for the *Division Awards Dinner* being held Tuesday at the Buckhorn Exchange from 6:00-8:30 PM. A dinner for the Executive Committee was also organized for Monday at 8:00 PM at Ruth Chris Steakhouse in Denver.

The **Membership Report** was provided partly via email by Michael Qian, who indicated that AGFD support of the 4th IFFC in New Zealand is expected to secure 20-30 new ACS-AGFD members. A General Division membership report was not provided.

Coralia Osorio Roa gave the **Journal Report**. The ACS agricultural and food portfolio of journals continue to perform very well in 2024. Submissions to *Journal of Agricultural and Food Chemistry* are expected to surpass 10,000. Published article output at JAFCD also continues to grow significantly. Submissions to the daughter journals, *ACS Food Science & Technology* and *ACS Agricultural Science & Technology*, are also continuing to skyrocket since they received their first Impact Factor in June last year. The ACS Food Science & Technology impact factor increased from 2.3- 2.5. JAFCD is excited for the Research Article of the Year Award Lecture which will take place from 2:00-3:10 pm on Tuesday August 20th in Room 403 of the Colorado Convention Center and invited everyone to attend this lecture to hear about the award-winning science behind cell-culture coffee. Coralia expressed the journal's appreciation of the partnership with the AGFD Division on this award and thanked those who represented the AGFD Division on the Award Committee.

The **Communications Report** was given by Michael Appell who indicated that in the past month the Website had 462 unique visitors: 370 from the US, China 18, and Germany 17. In the past year, we have had 2475 unique visitors, 2024 of whom were from the USA, China 136, Germany, 113 Canada 111, India 71, and Russia 68. Our E-mail list, which currently stands at ~2,400 people, has shown promising engagement. Alyson's newsletter has been a hit, with over 1,000 people opening and reading it—a testament to its success. *Cornucopia* was a hit, with over 1100 people clicking and reading it, and 385 downloading it, a clear indication of its popularity. In terms of student engagement, 1100 clicked on and read the student event flyer. Additionally, 1300 read the webinar announcement for H.N. Cheng and 445 clicked on the link. The Inaugural AGFD Webinar had 30 attendees, and 81 registrants. The Webinar is now posted on the YouTube channel.

LinShu Liu gave an update on **AGFD Strategic Planning**. Three goals were set for the Division at the Strategic Planning Retreat including Strategy, Membership and Communication. LinShu indicated that increased webinars were a target within the Strategy goal and that one webinar had already been created and is now available on the AGFD YouTube channel. Lucy Yu gave the update for the Membership goal. A mentoring program committee was formed composed of members from government, industry, non-profit organization and academics. The committee members include Kanjana Mahattanatawee, Liangli (Lucy) Yu, Lauren Jackson, Youngmok Kim, and Kenny Xie. Kanjana and Lucy identified three potential mentoring activities for the committee to discuss and finalize. One new activity included recruiting both volunteer mentors and mentees at the Fall ACS national meeting. Michael Appell and Alyson Mitchell indicated that the email Listserve is now migrated to the new AGFD Wix website. The first electronic newsletter went out this month and was very successful. The committee has identified new members to help with content creation and will be meeting in September via Zoom to develop a strategy for increasing our social media presence at the Spring 2025 meeting. Alyson Mitchell proposed handing out Visa gift cards each day for the top 1-2 short format videos to encourage social media posting and help create content during the Spring meeting.

In **Outstanding Business**, Jason Soares indicated that he and Fereidoon Shahidi worked with DAC to get approval for IUFOST Adhering Body membership. The request is currently with the Constitutional Bylaws Committee of ACS. Michael Appell gave a report on the activities of the Past Leaders Committee. Although the committee is new, they have put together a social event on Wednesday, and will meet through Zoom before the Spring meeting.

In **New Business**, Liz Kreger indicated that the Division has been allotted 19 half-day sessions, two of which have to be jointly programmed for the Spring 2025 meeting. The allocation for Fall 2025 is 23 half-day sessions; two of which have to be jointly programmed sessions. Mike Morello suggested that Executive Committee consider consolidating the awards symposia at national meeting into one half-day session instead of having a half-day session for each individual award. Extra programming could always be considered around an individual. Liz proposed forming a Slack channel or Google drive to serve as a repository for all information for the Executive Committee members to share. A motion was

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approved to have Liz, Alyson and Mike Appell meet via Zoom and develop a plan to create this platform by November 2024. To address any ambiguity in the AGFD Procedures Manual, it was agreed that we need to change the language to ensure that all Subdivision members need to be Division members. Jason Soares gave an update on AGFD participation in support of ACS Regional Meetings and indicated that at this time these are only supported if the topic is within the AGFD portfolio and funding is determined on an ad hoc basis.

The meeting adjourned at 7:54 PM. *Submitted by Liz Kreger.*

AGFD Business Meeting Minutes

Wednesday, August 21, 2024

Colorado Convention Center Denver, CO

Takes place at each ACS Fall National Meeting

Attendees: Michael Appell, Lingyun Chen, Elyse Doria, Xuotong Fan, Boyan Gao, Elizabeth Kreger, Yonghui Li, LinShu Liu, Alyson Mitchell, Jason Soares, Michael Tunick, Chibuike Udenigwe, Lucy Yu, Kenny Xie, Xuan Xu

AGFD Chair Jason Soares called the meeting to order at 12:04 p.m. (MDT). Jason mentioned that subdivision officers should be AGFD members. The bylaws do not require this once the initial officers are appointed. The Procedures Manual, which includes the bylaws, can be placed on the website. The Past Leaders Committee, chaired by Mike Appell, can work on best practices for the manual. LinShu Liu pointed out that this committee can work on revising the bylaws.

Alyson Mitchell summarized the Executive Committee meeting minutes. Poster and oral paper no-shows and withdrawals were discussed. The banquet at the Buckhorn Exchange went well. The petition for international representation on Council passed overwhelmingly. AGFD is looking for a new student representative. Our website is very active, and we have two new volunteers for it. Mike Appell and Alyson Mitchell will consolidate our social media onto the Wix platform.

Mike Tunick gave attendance figures for this meeting (over 10,200 in person and over 1200 virtual). Starting in 2026, the Sundays of the meetings will be devoted to special programming (Kavli and Plenary sessions, etc.) and regular talks and posters will be on Mondays through Thursdays.

Jason Soares announced the slate of officers, which was approved. As always, AGFD members vote on Councilor and Alternate Councilor candidates. Jason also asked about financial support for Regional Meetings. This can be done on a case-by-case basis. Mike Appell said that ACS now encourages organizers of these meetings to seek funds from divisions. He said that the requestors should be AGFD members to receive our support. Lucy Yu said that we should also think about support for international meetings. Jason suggested that the Past Leaders Club also provide best practices on supporting Regional Meetings, defining benefits to AGFD, suggesting financial support and guidelines on the extent of support for each regional meeting when multiple requests are submitted.

Liz Kreger will look into flash presentations (less than 5 minutes) and handling General Paper sessions. We may rename them something like Advances in Agricultural and Food Chemistry and group the presentations by subject.

The meeting adjourned at 1:00 p.m. *(submitted by Liz Kreger)*

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

AGFD TECHNICAL PROGRAM

Abstracts for these papers appear in the 'with abstracts edition' of *Cornucopia* posted on the AGFD website

SUNDAY MORNING March 23

Marriott Marquis San Diego: Salon B

James Seiber Memorial Symposium

Hosted by AGFD, AGRO

K. L. Armbrust, J. Finley, M. D. Pazcarpio-Obeso, J. M. Van Emon, S. S. Walse, *Organizers* M. Hengel, A. E. Mitchell, *Organizers, Presiding*

8:00 Introductory Remarks.

8:30 . Encouraging young chemists into agricultural chemistry: Jim's legacy. **S.S. Walse**

8:55 . Perspectives on the use of liquid chromatography-high resolution mass spectrometry for chemical residue and contaminant analysis in foods. **J.W. Wong**, J. Wang

9:20 . Using the tools of chemistry to produce novel, healthy, value-added foods. **T.H. McHugh**

9:45 Intermission.

10:10 . Odds and ends: Research projects under the supervision of James Seiber as an emeritus professor. **D. Lay**

10:35 . Seiber wisdom I applied to the environmental and analytical chemistry applied to PFAS. **S.A. Mabury**

11:00 . Vegetation as a vector for transfer of mercury from the atmosphere to organisms in terrestrial food webs. **M.S. Gustin**

11:25 . Accolades for odors and the agricultural opportunities they afford. G.T. Broadhead, C.C. Rering, **J.J. Beck**

SUNDAY AFTERNOON

Marriott Marquis San Diego: Salon B

James Seiber Memorial Symposium

Hosted by AGFD, AGRO

J. Finley, M. Hengel, A. E. Mitchell, J. M. Van Emon, S. S. Walse, *Organizers* K. L. Armbrust, M. D. Pazcarpio-Obeso, *Organizers, Presiding*

2:00 . Jim Seiber's positive impact on science and students. **J.M. Van Emon**, A.W. Coates

2:25 . Love and hate are in the air. **Q.X. Li**

2:50 . Dissipation of pesticides under California rice field conditions. **R.S. Tjeerdema**, D. Bonnar, A. Gunasekara, T. Jabusch, R. Mulligan, Z. Redman, C. Rering, P.L. Tomco, M. Vasquez, K. Williams

3:15 Intermission.

3:35 . Ingested chemicals influence fitness: Lessons learned from butterflies, nightshades, human birth cohorts, and PFAS-contaminated farms. **D.D. Jones**

4:00 . Almond quality research from the orchard to the winery. **A.E. Mitchell**

4:30 A Remembrance of James Seiber.

Beyond the Beaker: Where Can Chemistry Take You?

Spons. SOCED, Cospons. AGFD, PROF

SUNDAY EVENING 7PM

Convention Center Hall B2/C

AGFD General Posters & Undergraduate Poster Competition & Graduate Student Competition

K. Deibler, E. Kreger, C. Osorio Roa, *Organizers*

684. Development of benchtop NMR techniques for kombucha analysis. **A.G. Morgan**, J.L. Perrin, L. Melara, J.N. Richardson, J. Kegerreis

685. Comparison of lignan content and antioxidant activity in five perilla varieties cultivated in Korea. **Y. Kim**, M. Kim, J. Kim, Y. Kim

686. Strawberry shield: Unveiling the antimicrobial paper defenses. **C. Pruitt**, E. Almenar, P. Khule

687. Molecular dynamics simulations of *Trans* fatty acid formation in various oils during high-temperature frying. **C. Lee**, L. Hong, L. Hwang, C. Liu, J. Zhao

688. DNA delivery by virus-like nanocarriers in plant cells. **M. Youngblood**, H. Kim, J. Giraldo, N. Steinmetz, G. Lowry, A. Caparco

689. Xanthan gum- based edible coatings enriched with grape stalk extract for prolonging the shelf life of white grapes (*Thompson seedless*). **V. Bodana**, V. Katiyar

690. Development of a kinetic model for the dynamics of kombucha fermentation. **J.L. Perrin**, A.G. Morgan, L. Melara, J.N. Richardson, J. Kegerreis

691. Hydrophobic plant protein-polysaccharide blend facilitates low-temperature production of sustainable meat alternatives. B. Devnani, **N. Tan**, L. Grossmann

732. Comparison of phenolic composition, flavonoid content, and antioxidant properties among cacao nibs sourced from different origins. **S.J. Hazen**, H.P. Lawson, E.D. Niemeyer

733. Protecting crop health: Machine learning for weed detection with hyperspectral imaging. **S. Gandhok**, **T. Pollock**, E. Lopez, A.K. Sharma, A. Jani

734. Almond shells: An innovative solution for phenolics in winery wastewater. **P. Zhang**, E. Doria, L.A. Lerno, A.E. Mitchell

735. Nitrite content in cured meats commercialized in Costa Rica: A comparative study from 2022 to 2024. J. Ramirez Alfaro, K. Hernandez Ugalde, **M. Porrás Fonseca**, J.A. Rodríguez Corrales

736. *Annona muricata* leaves and stem as an antibacterial agent against Gram-positive and Gram-negative bacteria. **J.E. Santiago-Martell**

737. Optimized fermentation conditions of whole pulses using *Lactobacillus plantarum* and its effect on scavenging capacity and markers of type 2 diabetes. **A. Valdes Alvarado**, D. Castaneda Reyes, E.G. Demejia

738. Almond shells as a natural biosorbent for the removal of phenolics in winery wastewater. **E. Doria**, L.A. Lerno, A.E. Mitchell

739. Distinctive sterol profiles in two species of morel mushrooms: *Morchella tomentosa* and *Morchella americana*. **T.W. Nalli**, A. Overgard, S. Quint, N.Y. Walker, C. Chu

740. Training a machine learning algorithm to estimate plant biomass from single agricultural images. T.A. Cristales, D. Rakijian, **M.M. Allard**

741. Evaluating concentrations of five PFAS in agricultural soils of Puerto Rico. **J. Torres Ruiz**, I.E. Popova, D. Bair

742. Effects of parental nutrition on offspring development of Alzheimer's Disease. **N. Boehly**, B. Brown, M. Hale

- 743.** Quantification of steroid hormones in grocery store meat samples via LC-MS/MS. **C.C. Huffman**, S.E. Jaynes, N. Duncan, D. Crain
- 744.** Evaluation of chemical attributes and volatile markers of extra-virgin avocado oils extracted from different California varieties. **F. Kulapichitr**, D. Wannasin, D. Obenland, S. Wang, M. Arpaia
- 745.** Investigating the impact of lactic acid bacteria fermentation on the physicochemical properties of plant based protein. T. Parveen, **D. Wang**
- 746.** Antioxidant dendrons. **S. Medes**, A. Lapratt, C.Y. Lee
- 747.** Comparative metabolomics and neuroprotective potential of pomegranate cultivars. **Y. Wang**, H. Lee, J. Chater
- 788.** Low-pressure air plasma seed surface modification to expedite seed germination. **P. Aguilera**, M.J. Hawker
- 789.** Effects of Papaya ringspot virus on organic molecules in squash leaves. **G. Palomar**, P. Taylor, R. Sheaff, A. Ali
- 790.** Analysis of lead and cadmium in dark chocolate bars and cocoa powders. V. Pipinich, **R.C. Dudek**
- 791.** Investigation on separation and analysis of stereoisomeric flavonolignans from milk thistle using chiral HPLC columns. **D. Hahn**, S. Yu, T. Cao, S. Lee
- 792.** Tissue distribution and metabolism of polymethoxyflavones from orange peel. **Y. Wang**
- 793.** Analysis of lignan content and volatile compounds in the Korean wild chive (*Allium monanthum*). **Y. Kim**, J. Yu, J. Lee, K. Kim, J. Sung, Y. Kim
- 794.** Blooming solutions: Transforming eutrophic algal blooms into biofertilizers. **A. Moore**, T. DeBellis, R. Bague, N.K. Knowlton
- 795.** Analysis of biotin content in commonly consumed foods in Korea. **J. Yu**, J. Lee, Y. Kim, E. Park, Y. Choi, Y. Kim
- 796.** Lignan contents of frequently consumed agro-foods in Korea. **J. Lee**, Y. Kim, J. Yu, H. Kim, Y. Kim
- 797.** Measurement of urinary magnesium in domestic swine by conductometric titration. **L.D. Schultz**, R. Srinivasan, L. Jackson, M. McAfee
- 798.** Enhancing nutritional science with molecular dynamics: A focus on the Maillard reaction. **W. Mathers**, L. Hwang, J. Zhao, C. Liu, C. Lee, L. Hong
- 799.** Chemical inhibition of enzymatic browning during mealworm (*Tenebrio molitor*) protein extraction. K. Tran, J.J. Love, J. Zhao, **C. Liu**
- 800.** Applying FT-ICR MS with formula assignment algorithm on the Chinese Medicine Characterization. **K.Y. Chow**, X. Mo, L. Zhang, C.Y. Lau, D.T. Chan, P. Shaw, A.T. Chow
- 801.** Characterization of organic acids in fruited sour beers. **N. Tiwari**, M. Holle
- 802.** Reaction of ergothioneine with redox active dyes: Implications for the redox potential and detection of ergothioneine. **C.T. Cao**, D. Keltner, W.E. Geiger, R. Hondal
- 803.** Creepy carrots: A biocatalyst for reduction reactions. **P.A. Horsley**, A.M. Wilson
- 850.** Use of various energy molecular orbitals in the AI design of new herbicides. **M. Shaver**, J.A. Darsey
- 851.** Antidiabetic activity screening of Costa Rican plant extracts: Inhibition of advanced glycation-end products. **M.B. Gomez**, D. Arrieta, P. Chivi Ramirez, E. Gamboa, C.M. Martinez Mora, A.F. Carballo-Arce, J.A. Rodriguez Corrales
- 852.** Shellac-based microgels for enhanced probiotic delivery. **K. Calumba**, Q. Zhong
- 853.** Effects of *Lantana camara* L. leaves extracts and essential oils in the production and protection of tomato (*Solanum lycopersicum* L.) Roma VF. **A.A. Sotade**
- 854.** Production, physicochemical and sensory quality of bottled and sterilized tigernut milk: Exploring the future of plant-based beverage from an underutilized crop. **C. Okorie-Humphrey**
- 855.** Physicochemical characterisation and investigation of antioxidant properties of Southwest Missouri floral honey and honey related product Propolis using FRAP, GC/MS, GPC, XRF and DSC. **L. Milam**, G. Fernando
- 856.** Avocado oil based oleogels: a comparative analysis of the physical characteristics of various structuring agents. **C. Carter**, R. Silva
- 857.** Comparing the flavour profiles of gin using high-capacity sorptive extraction and GC×GC–TOF MS. L. McGregor, K. Murtada, M. Gaida, **M. Edwards**, B. Green
- 858.** Physicochemical properties, quality, and characteristics of traditional Bulgarian artisanal cheese from raw sheep's milk during ripening. **H. Fidan**, S. Ibrahim, S. Stankov, T. Balabanova
- 859.** Designing research diets using USDA food composition tables and ICP-OES. **C.N. Vialva**, S. Cao, C. Weaver
- 860.** Quantitative analysis and thermal stability of cannabinoids in commercial hemp products using Q-ToF LC-MS/MS. **A. Duzan**, S. Ibrahim, M. Basti
- 861.** Nutrient composition and functional properties of microalgae as food ingredients. **C. Williams**, J. Rockwell, L. Feng, C. Liu, C. Zuniga, J. Zhao
- 862.** Withdrawn
- 863.** Antioxidant activities of limu extracts in a beverage system. **B. West**
- 864.** Production of Maillard reaction intermediates during mashing and boiling of a single malt, single hop (SMAsh) beer. **A. Lo Presti**, C.A. Hughey
- 865.** Importance of water-induced molecular organization in petfood aromatic and the selection done by pets. **M. Trehiou**
- 925.** Effect of soy-based textured vegetable protein and textured pea protein mixtures on the physicochemical properties of hybrid beef burger patties. **S. McBride**, H. Khouryieh, L. Pereira Silva
- 926.** Esculetin inhibited fat accumulation in *Caenorhabditis elegans* through insulin/insulin-like growth factor and AMP-activated protein kinase pathways. **A.T. Kim**, Y. Park
- 927.** Sommelier training of an artificial nose. **L. Negom**, **L. Crumb**, E.A. Jarvis
- 929.** Evaluation of antioxidant activity in Costa Rican plants using the oxygen radical absorbance capacity (ORAC) method. **E. Gamboa**, M.B. Gomez, M. Avalos, S. Ruiz Mena, V. Álvarez Valverde, A.F. Carballo-Arce, J.A. Rodriguez Corrales
- 931.** Acute toxicity of chemical compounds on the biocontrol agent *Cryptolaemus montrouzieri* in citrus orchards. **A. Kaspi-Kaneti**, S. Singh, A. Protasov, G. Yaacobi, R. Kaspi
- 933.** Improving acidic stability of casein via glycation with hydroxypropyl methylcellulose. **B.A. Castellanos**, Q. Zhong
- 934.** Zein nano-carriers for the delivery of genetic materials to plants. **P. Maiti**, S. Santra, J. Pereira, E.A. Davidson
- 935.** Synthesis and evaluation of d-mannitol-based antioxidant dendrimers. **B. Agbemade**, C.Y. Lee
- 936.** Structure of anthocyanin complex with flavonoids and metals to form blue coloration under acidic conditions. **X. Fan**, M. Giusti
- 937.** Predicting protein gelation properties through modeling using published literature results. **J. Zhao**, D. Hecht, R. Roni, M. Esmaelian, A. Raza, D. Grabinski
- 938.** Sensory similarity and consumer preferences of plant-based seafood analogues. **J. Wadman**, L. Feng, S. Lehrer, A. Raza, C. Liu, J. Zhao
- 997.** Using the AI program AlphaFold to engineer transient tertiary structure (TTS) tags to enhance αS1-casein solubility. **S. Murrell**, J.J. Love, M. Bartolovich, C. Liu, J. Zhao

998. Antioxidant activities of different microalgae species. **K. Kemenes**, D. Norena-Caro, C. Liu, C. Zuniga, J. Zhao

MONDAY MORNING March 24

Marriott Marquis Grand Ballroom: Section 6

Food Security: Tackling World Hunger CCC - Highlighting Chemistry from Multiple Divisions: Advancement in Crop Protection and Nutrient Analysis

Hosted by AGFD, AGRO, ANYL

C. L. Haynes, H. B. Irrig, M. J. Morello, *Organizers* S. M.

Lomnicki, Z. Xie, *Organizers, Presiding*

8:00 Introductory Remarks.

8:05 . Science and technology developments to achieve global food security. **E. Lopez Lara**, G.P. Foy, K.E. Peterman, P.S. Weiss

8:30 . Withdrawn

8:55 . Bio-inspired proline sensors for diagnosis and surveillance of plant stress. C.L. Martin, J.R. Cicero, L.L. Springer, D.A. Geroulakos, A.C. Moos, **D.J. Wilson**

9:20 Intermission.

9:30 . Chemical indicator for climate-resilient sugar crops. **S.M. Uchimiya**

9:55 . Metabolomic insights of rhizosphere PFAS uptake, transportation, and bioaccumulation in mung bean sprouts. **A. Dhakal**, S. Mahdi, X. Ma, D. KC, R. Mu, Q. Yang

10:20 . Fate of antibiotic compounds in nutrient recovery systems. N. Bolujoko, **K. Mangalgi**

10:45 Intermission.

10:55 . Withdrawn

11:20 . Withdrawn

11:45 Closing Remarks.

Marriott Marquis San Diego: Salon B

James Seiber Memorial Symposium

Hosted by AGFD, AGRO

K. L. Armbrust, M. Hengel, A. E. Mitchell, M. D. Pazcarpio-Obeso, *Organizers* J. Finley, J. M. Van Emon, S. S. Walse, *Organizers, Presiding*

8:00 Introductory Remarks.

8:05 . There and back again: Tales from a dishwasher. **M. Hengel**

8:55 . Establishment of ion-spectrum library with high-resolution mass spectrometry (HRMS) for residual pesticide analysis. **J. Moon**, H. Jo, J. Sun

9:20 . Production of fertilizer byproducts from a lithium clay mine. **G.C. Miller**, D. Stem, C. Barile, S.M. Dunham-Cheatham

9:45 Intermission.

10:10 . Veterinary pharmaceutical research applications of residue analysis in complex matrices. **T.A. Wehner**

10:35 . Differences in trifluoroacetic acid concentrations in various consumer foods. **T.M. Cahill**, A. Hawley, M. Winne

11:00 . Air, water, fog and frogs – exploring the environment with James Seiber. **L.L. McConnell**

11:25 . Working the interface of science and regulatory policy.

K.L. Armbrust, D. Seth-Carley, L.L. McConnell

Chemistry of Sustainable Production in the Grape and Wine Industry

Spons. PRES, Cospons. AGFD

MONDAY AFTERNOON March 24

Marriott Marquis Grand Ballroom: Section 1

Breeding for Flavor Sensory Quality and Sustainability of Fresh and Fresh-Cut Fruits and Vegetables

X. Du, G. Nui, X. Sun, Y. Weng, *Organizers, Presiding*

2:00 Introductory Remarks.

2:05 . Cucumber sensory properties and the variance in flavor molecules (aroma and taste) in a GWAS panel. C.N. Duan, N. Latorre, T. Pham, T. Nguyen, J. Tan, Y. Weng, **X. Du**

2:35 . Key role of texture in fresh-cut vegetables and characterization of texture-related parameters in cucumber.

C.N. Duan, T. Nguyen, J. Tan, Y. Weng, X. Du

3:05 . Quantitative trait loci mapping of fruit firmness in cucumber. **Y. Weng**, J. Tan, T. Nguyen, C.N. Duan, **U. An**, X. Du

3:35 Break.

4:00 . Aroma composition of blackberries: Implications for flavor enhancement. **R. Sen**, K. Sheehan-Lust, S. Lafontaine, M. Leigh Worthington

4:30 . Effects of rootstocks on the flavor quality of huanglongbing-affected sweet orange juices. **Y. Wang**, X. Liu, F. Gmitter, J. Grosser

5:00 . Development of active packaging for postharvest preservation of fruit. **X. Sun**, C. Shu, Z. Yusufali

Marriott Marquis San Diego: Salon B

Withycombe-Charalambous Graduate Student Symposium

E. Kreger, C. Osorio Roa, *Organizers* K. Deibler, *Organizer, Presiding*

2:00 Introduction.

2:10 . Encapsulation of Phytochemicals through polymer-catechin particles self-assembled via tea-steeping. **S. Chang**, J. Pereira, A. Nordin, S. Santra

2:40 . Understanding how beverage components interact with aluminum beverage cans. **A. Montgomery**, R. Allison, M.J. Sheehan, J.M. Goddard, G.L. Sacks

3:10 . Baked-through butter flavor: Flavor dynamics of lactones during baking in a “shortbread” cookie model system. **H. Chai**, K.R. Cadwallader

3:40 Intermission.

4:05 . Combined cross-linked enzyme aggregates of β -galactosidase and glucose isomerase stabilized by trehalose nanostructure excipients. **J.G. Scott**, J.M. Goddard

4:35 . Engineering novel nucleic acid biosensors for the rapid on-site detection of foodborne pathogens using nanomaterials. **T. Kasputis**, J. Chen

5:05 . Simultaneous dual-gene detection of *Escherichia coli* O157:H7 based on CRISPR/Cas13-Mediated biosensor. **Y. He**, X. Zhang, J. Chen

Marriott Marquis Grand Ballroom: Section 6

Food Security: Tackling World Hunger CCC - Highlighting Chemistry from Multiple Divisions: Nanomaterials for Food Security

Hosted by AGFD, AGRO, ANYL

C. L. Haynes, H. B. Irrig, M. J. Morello, *Organizers* S. M. Lomnicki, Z. Xie, *Organizers, Presiding*

2:00 Introductory Remarks.

2:05 . Agricultural nanoparticle's impacts on soil enzymatic activity. **D. KC**, N. Tu, A. Dhakal, Y. Barazandegan, W. Doggett, L. Xu, T. Wuliji, J. Yang, Q. Yang

2:30 . Nanocarrier mediated delivery of insecticides into tarsi enhances stink bug mortality. **S. Sharma**, T. Perring, S. Jeon, H. Huang, W. Xu, E. Islamovic, B. Sharma, Y. Giraldo, J. Giraldo

2:55 . Withdrawn

3:20 Intermission.

3:30 . Application of nano-selenium and nano-boron as seed primers to enhance the germination and growth yield of maize and tomato. **P. Cervantes**

3:55 . Withdrawn

4:20 Intermission.

4:55 . Proximate, micronutrients and sensory properties of instant breakfast flakes from OFSP-cocoyam composite flour sweetened with date palms. **E.N. Odoh**
5:15 . Anthelmintic effects of phytochemicals from herbal plants for gastrointestinal nematode control in small ruminants. **C. Ke, S. Mahdi, R. Mu, D. K.C, T. Wuliji, Q. Yang**
5:35 . Bio-based approach for sustainable control of root-knot nematodes. **R. Rai, A. Hodson, C. Simmons, N. Nitin**
5:55 Closing Remarks.

TUESDAY MORNING March 25

Marriott Marquis San Diego: Salon A

Applying Mass Spectrometry and NMR Techniques in the Study of Plant and Food Metabolomics

T. D. Stark, *Organizer, Presiding*

8:00 Introduction.

8:05 . Integrated approach combining mass spectrometry, NMR, and chemometrics for quality and authenticity assessment of essential oils. **M. Wang, J. Zhao, I.A. Khan**
8:25 . Metabolic alterations of root exudates in *Lotus japonicus* caused by *Acidovorax* strains and arbuscular mycorrhiza. **F. Seufert, Y. Si, J. Krumbach, T.D. Stark, C. Gutjahr, C. Dawid**
8:45 . Characterizing bourbon whiskey via the mass spectrometry - based molecular fingerprinting. **C. Zhu**
9:05 . Integration of sensory and multi-omics approaches to understand flavor pathways in mango. **Y. Wang, X. Liu, J. Crane, X. Wu**
9:25 . Nontargeted LC/MS chemical profiling of chili pepper pungency. **J. Borchering, E. Tello, D.G. Peterson**
9:45 Intermission.
10:15 . Harnessing food volatilomics for sample categorization and sensory prediction. **J. Beauchamp, L. Friedrich, A.T. Grasskamp, H. Haug, M. Izaber, T. Sauerwald, S. Singh, G. Zeh**
10:35 . Targeted metabolomic approach to identify phenolic compounds in *Psidium friedrichsthalianum* fruit. T. Cuadrado-Silva, M. Pozo Bayon, **C. Osorio Roa**
10:55 . Mozambioside degradation products activate bitter taste receptors TAS2R43 and TAS2R46. **C. Czech, A. Di Pizio, M. Behrens, R. Lang**
11:15 . *In vitro* bioassay-guided isolation and identification of bioactive compounds by LC-MS *Parkia timoriana* (DC.) Merr. - a lesser-known edible medicinal plant species, from Manipur, Northeastern India. **S. Sureshkumar Singh, K. Kennedy Singh, C. Lal Sharma**
11:35 . Tracing the transfer of dietary chemosensates and their metabolites from the maternal diet into human milk and urine by means of a curry spice intervention study. **M. Gigl, K. N'Diaye, M. Debong, R. Lang, A. Buettner, T. Hofmann, H.M. Loos, C. Dawid**
11:55 Conclusions.

DIGITAL SESSION

AGFD General Papers - Agricultural and Food Chemistry Flash Talks

E. Kreger, C. Osorio Roa, *Organizers, Presiding*

10:00 . Evolution of metabolomics in the agricultural and food sciences. **A. Buko**
10:15 . Epitopes of Scy p 1 were identified through the bionics digestive system combined multi-omics. M. Liu, Y. Li, F. Huan, Y. Gu, Z. Sun, H. Liu, G. Chen, **G. Liu**
10:30 . Analysis of structure-allergenicity relationship by site-mutation in disulfide bond site from Cra a 4. **S. Gao, F. Huan, M. Wu, L. Ni, Y. Gu, Y. Liu, M. Liu, G. Liu**

10:45 . Designing a hypoallergenic derivative of Cra a 1 with the potential for tolerance induction. **F. Huan, S. Gao, L. Ni, M. Wu, Y. Gu, M. Liu, G. Liu**
11:00 Intermission.
11:10 . Substances of health concern: Label accuracy of cannabidiol and tetrahydrocannabinol in commercial tinctures from the United States. **Z. Sullivan, C. Lapiere, L. Weiser Erlandson, L. Pham**
11:25 . Characterization of odorants in thermally treated lobster mushrooms. **T. Nguyen, E. Darby, J.P. Munafa**
11:40 . Engineering climate-resilient crops using a nano-enabled strategy. **S. Chen**
11:55 . Characterization of the taste profile of Chardonnay marc fractions prepared through taste-guided fractionation. **N. Nguyen, J.P. Munafa**
12:10 Intermission.
12:20 . Will mixing different flavors and/or styles of waterpipe tobaccos before use increase consumer satisfaction and/or regulatory concerns?. **J.H. Lauterbach**
12:35 . Utilization of button mushroom stem waste in seafood analogs. **E. Darby, T. Nguyen, J.P. Munafa**
12:50 . Effects of media pH on lipid yield in microalgae *Pseudochloris wilhelmii* for biodiesel production. **E. Clayton, E. Clement, S. Fedele, C. Tobin, B.C. Eigenbrodt**
1:05 . Withdrawn
1:20 Intermission.
1:30 . Electrocatalytic activity of CeO₂ modified carbon electrodes for rapid H₂O₂ detection. **N. Gunasekaran, H. Muraleedharan Jalajamony, R. Adu, R. Fernandez, R. Govindarajan T**
1:45 . GC-MS analysis, antimicrobial potential, haematological and some pharmacological properties of *Terminalia avicennoides* Stem extracts. **O.O. Onawumi, A. Sodamade, D.L. Abiona, O.A. Adewusi, B.A. Adewole**

DIGITAL SESSION

Food Security: Tackling World Hunger CCC - Highlighting Chemistry from Multiple Divisions

Hosted by AGFD, AGRO, ANYL

C. L. Haynes, H. B. Irrig, M. J. Morello, *Organizers* S. M.

Lomnicki, Z. Xie, *Organizers, Presiding*

10:00 Introductory Remarks.

10:05 . Intelligent packaging for real-time meat freshness monitoring: Integrating an ionic liquid-modified anthocyanin nanosensor array with deep learning. **Z. Yu, M. Lin**
10:25 . Supervised multivariate curve resolution-alternative regression for the rapid detection and quantification of adulterated coconut oil by palm oil using Raman spectroscopic data. **V. B. Moneravilla, D. Rodrigo, G. Dharmarathne, N. Abeyasinghe, H. Jayaweera, S. Gunewardene**
10:45 . Reciprocal effect on lateral diffusion of receptor for advanced glycation endproducts and toll-like receptor 4 in the HEK293 cell membrane. **M. Walid**
11:05 . Assessment of the nutritional composition of a dough meal from Acha (*digitaria exilis*) flour fortified with soybean concentrate and UN-dehulled breadfruit flour. **O.C. Ogbuele**
11:25 . Polymer facilitated detection of toxic metal ions in water. **J. Hu, M. Bogar**
11:45 . Synthesis and characterization of nanocrystalline Samarium substituted Nickel Ferrites by Co-precipitation technique. **S.S. Modhave**

TUESDAY AFTERNOON

Marriott Marquis San Diego: Salon A

Chemistry of Alcoholic Beverages

N. O. Flynn, *Organizer, Presiding*

2:00 . Introduction: Chemistry of alcoholic beverages. **N.O. Flynn**

2:10 . Chemistry of beer styles. **N.O. Flynn**

2:40 . Quantifying the terroir of beer using HS-GCMS, HR LCMS, and GC-O. **R.A. Quinlan**, P. Pond, D. Mitchell, D.V. Liskin, A. Higgs, A. Brehm, K. Kingsbury

3:05 . Development and metabolomic assessment of low-cost bench-top malting protocol for laboratory-scale malt quality evaluation. **H. Rani**, J.G. Walling, S.J. Whitcomb

3:30 Intermission.

3:50 . Non-invasive optical sensors for authenticating Pisco spirits. **Y. Wu**, L. Rodriguez-Saona

4:15 . Evaluating commercially available yeast strains for their application and flavor profiles in non-alcoholic beer. A. Maust, R. Sen, **S. Lafontaine**

4:40 . Next chapter of reengineering non-alcoholic beer: Unmalted rice and *Saccharomyces ludwigii* in production. **C. Schubert**, S. Lafontaine

5:05 . Volatile aromatic compounds in *Canarium schweinfurthii* Engl blanched fruits, thermally pasteurized must and wine. **O. Francis**, J.L. Okullo, S. Natukunda, R. Komakech, J. Agea

Marriott Marquis San Diego: Salon B

Extraction, Recombinant Production, and Function of Proteins of Food Safety and Food Manufacturing Importance

Y. Zhang, *Organizer, Presiding*

2:00 . Novel green carbon dots: Free-radical scavenging and anti-inflammation. **W. Jun**, B. Sun, W. Fang

2:25 . Modulating molecular interactions in extruded pea protein isolate. **B. Hasan**, J. Ubbink

2:50 . Protein language model-based prediction of potential allergens in *Chlorella vulgaris*. **C. Liu**, Z. Du, Y. Li, J.J. Love, H. Altammami, S. Daley, S. Teran, C. Zuniga, J. Zhao

3:15 . Withdrawn

3:40 . Utilizing the AI protein design tool AlphaFold to enhance precision bacterial fermentation of bovine α 1-casein. **J.J. Love**, S. Murrell, C. Liu, J. Zhao

4:05 intermission break.

4:20 . Withdrawn

4:45 . Different isoforms of the 11S seed storage protein of hazelnut form hetero hexamers. **Y. Zhang**, F. Guo, A.J. Howard, Y. Xu

5:10 . Immunodetection of an egg yolk allergen: Chicken serum albumin (Gal d 5). **Q. Rao**, Y. Zhao, X. Jiang

5:35 . Withdrawn

WEDNESDAY MORNING March 26

Marriott Marquis San Diego: Salon B

AGFD General Papers - Food Safety and Agriculture

E. Kreger, C. Osorio Roa, *Organizers, Presiding*

8:00 Opening Remarks.

8:05 . GelMA-chitosan hydrogels as soil conditioners in agriculture. **B. Calbas**, F. Albreiki, Z. Carey, T. Wright

8:25 . Interpreting residues of glyphosate in food and dietary exposure. **L. Riter**, J. Vicini

8:45 . Withdrawn

9:05 . Examination and determination of acrylamide and synergistic components in small animal feed. **S. McComis**, T. Tatum, K. Allen, A. Czernik, G. Venson

9:25 Break.

9:55 . Acrylamide-calcium chloride-activated carbon composites generates atmospheric water for agricultural uses. **N. Hamidi**

10:15 . Growth and yield assessment of Tomato under elevated particulate matter concentration. **S. Pannu**, V. Singh, M. Kumar, U. Mina, P. Jain

10:35 . 3D-printed nanoparticle-based slow-releasing micronutrient fertilizers improves growth and productivity of wheat plants. **R. Rai**, P. Dhar

Marriott Marquis San Diego: Salon A

Microbial Food Safety - Emerging Technologies for Detection, Intervention, and Antimicrobial Packaging of Foodborne Pathogens

Y. Liu, *Organizer* X. Fan, T. Jin, *Organizers, Presiding*

8:00 Opening Remarks.

8:05 . Withdrawn

8:25 . Investigating xenobiotic interactions with the gut microbiota: an *in vitro* approach. **L. Liu**, J. Firrman, K. Mahalak, J. Lemons, A. Narrowe

8:45 . Impact of environmental heterogeneity on the competitive growth of antibiotic-resistant bacteria in food systems. **C. Zheng**, Y. Xing, Y. Men

9:05 . Washing and coating apple fruit with bio-based phenolic fatty acids reduce *Listeria innocua* populations. **X. Fan**, V. Ryu, H. Ngo, T. Jin

9:25 . How the FDA regulates food packaging and substances that come into contact with food. **E. Furukawa**

9:45 Coffee Break.

10:00 . Combination of antimicrobial treatments and packaging technology to enhance food safety and extend shelf life of root vegetables. **T. Jin**, X. Fan

10:20 . Enhancing chitosan-Zein films with *bergenia Ciliata* extracts: A comprehensive study on UV-protection, antioxidant, and antimicrobial properties. **A.B. Chand**

10:40 . Cellulose nanocrystals derived from maple leaves with partially retained lignin for Pickering emulsion stabilization and food preservation. **C. Ji**, Y. Wang

11:00 . Engineered micro/nanofibers/particles for food packaging applications. **D.K. Arserim Ucar**

11:20 . Characterization of antibiotic resistant *salmonella* recovered from organic and non-organic whole broiler carcasses using whole genome sequencing. **S. Parveen**, A. Punchihewage Don, Z. Chen, J. Meng

WEDNESDAY AFTERNOON

Marriott Marquis San Diego: Salon B

AGFD General Papers - Nutrition Topics

E. Kreger, C. Osorio Roa, *Organizers, Presiding*

2:00 . Identifying possible misleading labels on weight loss teas. R. Quinones, **H. Knott**, **K. King**

2:20 . Withdrawn

2:40 . Anti-Inflammatory and antioxidant effects of oleuropein in human skin cells: molecular mechanisms and potential cosmeceutical applications. **C. Liu**, H. Li, N. Deng, H. Ma, N.P. Seeram

3:00 . Cottonseed-derived ethanol extracts and gossypol on regulate glucose transport gene expression in mouse macrophages. **H. Cao**, K. Sethumadhavan

3:20 . Withdrawn

3:40 Break.

4:10 . Withdrawn

4:30 . Withdrawn

4:50 . Curcumin-metformin conjugate: Extremely facile microwave-induced organic synthesis and characterization via ESI-MS/MS. A potentially important target molecule for antiviral effect on SARS-CoV 2 viral load. **B. Dayal**, G. Dayal

5:10 . Deciphering the antioxidant capacity of common vitamins against specific reactive oxygen species by nuclear magnetic resonance. **J. Park**, H. Tang, P. Zhang
5:30 . Macromolecular antioxidants. **C.Y. Lee**

Marriott Marquis Pacific Ballroom: Section 26

Flavor Preferences of Cats and Dogs

J. Beauchamp, S. McGrane, *Organizers, Presiding*

2:00 Introductory remarks.

2:05 . Flavor perception and health: A two-way street. **N. Rawson**

2:25 . Sweet, umami, and kokumi taste perception of the domestic cat, an obligate carnivore. **S. McGrane**

2:45 . Role of organoleptic variety in food intake of domestic cats. A. Goyon, **M. Trehou**

3:05 . Genomic approach to investigate key feline taste receptors. **D. Roberts**, S. Michlig Gonzalez, A. Zollinger, S. Damak, G. Woodward

3:25 . Chemical pest defense by the characteristic response to silver vine and catnip plants in the domestic cat. **M. Miyazaki**

3:45 Intermission.

4:00 . Flavor enhancement strategies across life stages for cats and dogs. R. Schave, S. Anderson, D. Simmons, A. Monforte, **S. Martins**

4:20 . Analysis of polymorphisms in canine chemosensory receptor genes. **Y. Niimura**

4:40 . Impact of smell on dog's food choice. C. Petel, **E. Mehinagic**

5:00 . Resolution revolution: High-resolution mass spectrometry and pet food. **J.W. Marshall**, D. Hemmler, C. Roullier-Gall, L. Jones, S. Nadine, M. Rychlik, P. Schmitt-Kopplin, A.J. Taylor

5:20 . Characterizing the dynamics of aroma release from wet cat food for different formulations and feeding protocols. **J. Beauchamp**, N. Cleve, S. Nadine, C. Beckmann

Marriott Marquis San Diego: Salon A

Microbial Food Safety - Emerging Technologies for Detection, Intervention, and Antimicrobial Packaging of Foodborne Pathogens

X. Fan, T. Jin, *Organizers* Y. Liu, *Organizer, Presiding*

2:00 Opening Remarks.

2:05 . Withdrawn

2:25 . Propidium monoazide is unreliable for quantitative live-dead molecular assays. **S. Kaur**, L. Bran, G. Rudakov, M.S. Verma

2:45 . Application of an engineered anti-biofilm enzyme (ABE) to detect and remove *Listeria Monocytogenes*. **B. Berger**, S. Felton, K. Lynn, J. Lee, Y. He, A. Oest, A. Miller, C. Chen, C. Armstrong, J. Renye, J. Capobianco

3:05 . Nanopore-based sequencing and quantification. **A. Gehring**, **S. Harper**, K. Counihan, S. Tilman, S. Kanrar, G. Paoli

3:25 . Genetic engineering of a *Salmonella* phage to develop a rapid biosensor for host separation, concentration, and detection. **R.K. Anderson**, S.R. Nugen

3:45 Coffee Break.

4:00 . Withdrawn

4:20 . Withdrawn

4:40 . Development and application of aptamer-based biosensors for the rapid and sensitive detection of *Yersinia enterocolitica* across different growth stages. **M. Shoab**, W. Zhouping

5:00 . Helicase mediated isothermal amplification based on CRISPR/Cas12a for detection of monkeypox virus. **H. Wang**, Z. Chen, I. Yu

5:20 . Withdrawn

5:40 . Photoactivated CRISPR/Cas12a-HDA one-pot nucleic acid detection technology. **H. Liao**

THURSDAY MORNING March 27

Marriott Marquis San Diego: Salon B

AGFD General Papers - Protein Topics & Quality/Processing/Sustainability

E. Kreger, C. Osorio Roa, *Organizers, Presiding*

8:00 . Withdrawn

8:20 . Layer-by-layer chitosan coating of yeast protein isolate-stabilized emulsions: Effects on colloidal stability and curcumin bioaccessibility. **S. Lee**, M. Jo, Y. Choi

8:40 . Withdrawn

9:00 . Simulating oxidative pathways in linoleic acid: a molecular dynamics approach to safeguard food quality and extend shelf life. **A.S. Vaishya**, L. Hwang, L. Hong, J. Zhao, C. Liu

9:20 . Use of microwave-assisted processes for agro-based materials. **H. Cheng**, A. Biswas, M. Appell, H. Cao, Z. He, K. Klasson

9:40 Break.

10:10 . Biodegradable, water-stable, and reusable drinking straws from papaya agricultural wastes. **R. Rai**, P. Dhar

10:30 . Release dynamics of bioactives (anthraquinones) encapsulated in casein micelles during in vitro digestion. **U. Sadiq**

10:50 . Investigating the migration of volatiles from food packaging into rolled oats. **M. Edwards**, K. Murtada, J. Ogden, M. Gaida, L. McGregor

11:10 . Impact of UV-A dehydration on food product quality and structure. **S. Karami**, L.J. Bastarrachea

11:30 . Techno-economic perspective of chickpea hulls-derived dietary fiber affected by extraction methods. **Y. Li**, K. Sivakumar, S. Hong, Z. Xu, B. Rajpurohit, H. Wang, Y. Li, H. Huang, Y. Xu

11:50 . Exploring the versatility of oleogels in food systems: Structural, functional, and sensory attributes. **R. Silva**



Mark August 17 - 21, 2025 on your calendar for the
270th ACS National Meeting in
Washington D.C.



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Schedule of AGFD Technical, Business and Social Meetings (all Pacific Daylight Time)

Sun. March 23	noon-1:00	Special Topics Meeting	ask at AGFD info table
Mon. March 24	noon-1:00pm	Future Programs	ask at AGFD info table
Mon. March 24	5:00-8:00pm	Executive Committee Meeting	ask at AGFD info table
Tues. March 25	6:00pm-8:30pm	Chair's Reception (see cover)	Joe's Crab Shack