

**AACC International
CENTENNIAL MEETING
PROGRAM BOOK**

**October 18–21, 2015
Minneapolis, Minnesota, U.S.A.**



*Setting the Stage
for the Next
100 Years of
Cereal Science
Innovation*

Brabender[®] CWB

...where quality is measured.



Many thanks to all the attendees of our successful LIVE food extrusion demo at the IFT 2015 Food Expo

Quality Laboratory Extrusion

ADVANTAGES:

Single Screw Extruder



- Small sample sizes means that several extrusion runs can be performed in a day

- Clamshell barrels and segmented screws make these units customizable to meet your testing needs

- Requires only a small laboratory footprint

- Single-screw and twin-screw extrusion systems available

Conical Twin Screw Extruder



201.343.8425

foodsales@cwbrabender.com

www.cwbrabender.com





Congratulations
AACCI

100 years and going strong

Thank you to all of the staff, volunteers and organizations who have made AACCI a success. Here's to the next 100.



CENTENNIAL DEDICATION

For the past century, AACC International has been dedicated to providing opportunities for exchanging knowledge in cereal grain science and advancing innovation through collaboration, research, education, technical service, and advocacy. This meeting celebrates and honors the organization's founders, past presidents and committee members, and current leaders who have helped to shape and guide AACCI during the past 100 years.

2016 and beyond will bring new challenges to the cereal grain industry. Today's leaders are the "Faces of the Future" and will continue to move the organization and cereal grain science forward into this next century.

We would like to acknowledge our past presidents who have been instrumental in creating the foundation for our future leaders and the organization.

AACC International Past Presidents

1915-1917: H. E. Weaver*	1971: E. J. Bass
1917-1919: C. J. Patterson*	1972: K. A. Gilles
1919-1921: R. W. Mitchell*	1973: R. L. Whistler*
1921-1923: S. J. Lawellin*	1974: J. H. Nelson
1923-1925: M. J. Blish*	1975: F. E. Horan*
1925-1927: R. J. Clark*	1976: H. C. Becker*
1928: L. R. Olsen*	1977: W. Bushuk
1929: C. E. Mangels*	1978: D. G. McPherson*
1930: M. A. Gray*	1979: L. F. Marnett*
1931: C. G. Harrel*	1980: R. A. Morck*
1932: R. K. Durham*	1981: W. J. Hoover*
1933: L. D. Whiting*	1982: J. J. Watson*
1934: R. C. Sherwood*	1983: N. L. Betz*
1935: M. M. Brooke*	1984: D.R. Lineback
1936: W. Platt*	1985: B. L. D'Appolonia
1937: H. D. Liggitt, Jr.*	1986: W. M. Schwecke
1938: C. H. Bailey*	1987: J. Vetter
1939: W. F. Geddes*	1988: L. F. Hood
1940: G. F. Garnatz*	1989: R. R. Hahn
1941: C. F. Davis*	1990: R. C. Hosenev
1942: C. N. Frey*	1991: J. J. Warthesen*
1943: J. M. Doty*	1992: B. Stillings
1944: B. Sullivan*	1993: A. A. Betschart
1945-1946: O. Skovholt*	1994: W. A. Atwell
1947: P. Logue*	1995: D. G. Medcalf
1948: R. M. Sandstedt*	1996: H. Faridi
1949: W. L. Haley*	1997: W. Hurley*
1950: F. C. Hilderbrand*	1998: O. K. Chung
1951: J. A. Shellenberger*	1999: F. Hegele
1952: H. K. Parker*	2000: J. M. Jones
1953: J. A. Anderson*	2001: J. BeMiller
1954: R. A. Barackman*	2002: B. B. Heidolph
1955: F. R. Schwain*	2003: B. J. Donnelly
1956: W. H. Cathcart*	2004: J. Dexter
1957: L. Zeleny*	2005: G. Lookhart
1958: W. B. Bradley*	2006: S. Craig
1959: C. L. Brooke*	2007: R. Hamer
1960: D. B. Pratt, Jr. *	2008: B. Bruinsma
1961: J. A. Johnson*	2009: M. Camire
1962: J. W. Evans*	2010: K. Khan
1963: M. M. MacMasters*	2011: B. McCleary
1964: J. W. Pence*	2012: D. Rogers
1965: P. E. Ramstad*	2013: D. Hahn
1966: R. H. Cotton*	2014: J. Delcour
1967: W. S. Claus*	
1968: K. L. Harris*	
1969: D. K. Mecham*	
1970: B. S. Miller	

Year listed is year served as President at annual meeting.

* Deceased



Word cloud containing terms related to cereal science and innovation, including: INNOVATION, SUSTAINABLE, GLOBAL, PROCESSING, SOLUTIONS, SCIENCE, HEALTHY, FUTURE, GRAIN, EXTRUSION, and CEREAL.



Welcome to Minneapolis and the Centennial Meeting of AACC International.

Your place in the broad area of cereal science has never been more important or relevant as we decide, as an association, how to define ourselves over the next century. I urge you to make the most of your experience at this meeting. Create a customized

schedule; consider attending sessions outside your immediate area of expertise; reconnect with colleagues and friends; meet new associates; become involved; and define your path toward the future of grain science. The meeting we have all been looking forward to with great anticipation is here. Experience Centennial!

Devin Rose

2015 Program Team Chair



Welcome to the 100th Anniversary AACC Centennial Meeting in Minneapolis!

We have returned to the headquarters city of the organization for this important celebration and have arranged a number of special events to mark the occasion. But as always, it is the science that takes center stage. In this meeting, we continue

to bring you ground-breaking research, sessions on topical and emerging subjects, and opportunities for networking and developing your cereal grain science contacts. So enjoy the fun and enhance your knowledge and career. See you around!

Gerard Downey

AACC International President



What a fantastic opportunity to celebrate all of our collective accomplishments in this centennial year of AACC International.

With our rich history as a foundation and our extremely talented membership base, I am confident our organization will continue to lead the cereal grain sector and the related grain-based biosciences in the

ever-changing marketplace of 2016 and beyond. Through cutting-edge research and global collaboration, our members will remain leaders at finding innovative and impactful solutions for the new challenges our industry will face as we move into the next century.

Lydia Tooker Midness

AACC International President-Elect

2015 AACC Centennial Meeting Program Planning Team

Program Team Chair

Devin J. Rose, *University of Nebraska, U.S.A.*

Program Team Vice Chair

Satya Jonnalagadda, *Kerry Ingredients & Flavours, U.S.A.*

Scientific Initiative Chairs and Vice Chairs

Biotechnology & Sustainability

Chair: David F. Kendra, *BASF, U.S.A.*

Vice Chair: Chrispin Howitt, *CSIRO - Agriculture Flagship, Australia.*

Chemistry & Interactions

Chair: Bram Pareyt, *Puratos NV, Belgium*

Vice Chair: Katharina Konitzer, *Deutsche*

Forschungsanstalt Fur Lebensmittelchemie, Germany

Engineering & Processing

Chair: Monjur Hossen, *Kellogg Company, U.S.A.*

Vice Chair: Katharina Konitzer, *Deutsche Forschungsanstalt Fur Lebensmittelchemie, Germany.*

Food Safety & Regulatory

Chair: Mary O'Meara Gillespie, *Grain Millers, Inc., U.S.A.*

Vice Chair: Simon Penson, *Campden BRI, United Kingdom*

Health & Nutrition

Chair: Derek Stewart, *The James Hutton Institute, United Kingdom*

Vice Chair: Yi Fang Chu, *PepsiCo, U.S.A.*

Ingredients & Innovations

Chair: Susan Kamper, *General Mills, U.S.A.*

Vice Chair: Cristina M. Rosell, *IATA - CSIC, Spain*

Quality & Analytical Methods

Chair: Chris L. Miller, *Kansas State University, U.S.A.*

Vice Chair: Simon Penson, *Campden BRI, United Kingdom*

Emerging Topics

Vice Chair: Lauren Brewer, *General Mills, U.S.A.*

AACCI Centennial Planning Committee

Chair

William A. Atwell, *Retired, U.S.A.*

Members

Dilek L. Austin, *Novozymes North America Inc., U.S.A.*

Lauren R. Brewer, *General Mills, U.S.A.*

Jan A. Delcour, *Katholieke University of Leuven, Belgium*

Gerry Downey, *TEAGASC, Ireland*

Sean M. Finnie, *Bay State Milling, U.S.A.*

David H. Hahn, *Dakota Grower's Pasta Co., U.S.A.*

Laura M. Hansen, *General Mills, U.S.A.*

Peter Koehler, *DFA fuer Lebensmittelchemie, Germany*

Barry V. McCleary, *Megazyme International Ireland Ltd., Ireland*

Steven C. Nelson, *Retired, U.S.A.*

Rachel Prosofski, *Marathon Foods, U.S.A.*

Joshua D. Reid, *Kellogg Co., U.S.A.*

Deborah E. Rogers, *AIB International, U.S.A.*

Devin J. Rose, *University of Nebraska, U.S.A.*

Christine N. Shearer, *General Mills, U.S.A.*

TABLE OF CONTENTS

MEETING INFORMATION

Mobile App	6
Sponsors	7
General Information	9
Medical Emergency and Safety Procedures	9
Maps	10

SCHEDULE AT A GLANCE

Scientific Sessions-at-a-Glance with Session Formats	14
Innovation and Networking	16
Approved Methods Technical Committee Meetings.....	16
Divisions, Sections, Alumni Meetings, and Events	17

SATURDAY

Saturday Schedule	19
Saturday Daily Highlights.....	19

SUNDAY

Sunday Schedule.....	20
Sunday Daily Highlights.....	21

MONDAY

Monday Schedule	22
Monday Daily Highlights	23
Monday Morning Sessions & Presenters	24
Monday Afternoon Sessions & Presenters	26
Supplier Innovation Sessions (Monday & Tuesday)	26

TUESDAY

Tuesday Schedule	28
Tuesday Daily Highlights	31
Tuesday Morning Sessions & Presenters	32
Tuesday Afternoon Sessions & Presenters	36

WEDNESDAY

Wednesday Schedule.....	38
Wednesday Daily Highlights.....	39
Wednesday Morning Sessions & Presenters.....	40
Wednesday Afternoon Sessions & Presenters	42

SCIENTIFIC POSTERS

Hours.....	44
Categories	44
Titles and Authors	44

RECOGNITION

Corporate Members	55
2015 AACC International Awardees	56
Analytical Accuracy Awards for 2014.....	59
2014–2015 AACC International Board of Directors	61
Committee Chair and Member List	62
Headquarters and Staff Listing	65

EXHIBITION

Exhibit Hall Floor Plan and Prize Drawings	67
Exhibit and Poster Viewing Hours	68
Exhibitor Descriptions	68
Exhibitor Numerical Listing	78

INDEX

Author Index	81
Advertisers' Index	86
Notes	87

U.S. Food Waste Challenge



On June 4, 2013, the U.S. Department of Agriculture (USDA), in collaboration with the U.S. Environmental Protection Agency (EPA) launched the U.S. Food Waste Challenge, calling on others across the food chain—including producer groups, processors, manufacturers, retailers, communities, and other government agencies—to join the effort to reduce, recover, and recycle food waste. AACCI supports this effort by working with the hotels and convention centers to donate food from AACCI meetings to food shelves in the local area.

GET SOCIAL – Connect at the Meeting and All Year

Follow and join our social media groups so you can connect now and after the meeting.

- Use the meeting hashtag **#aacci15**.
- Follow @aaccintl on Twitter.
- Like AACC International on Facebook.
- Join the AACC International group on LinkedIn.



Our Science, Our Future

George Lookhart, 2004
AACCI President

“The futures of the cereal grain science industry and AACCI are bright. New advances in genetics and processing technologies along with changes in healthy eating habits will require and ensure the viability of AACCI and the cereal grain science community.”



Expertise that Inspires *Globally*

CULINARY • CONVENIENCE • INDULGENCE • HEALTHY REDUCTION • NATURAL • FORTIFICATION

Create your Masterpiece

ICL Food Specialties' global experts provide proven ideas to accelerate new product development. Focused on trend-inspired food and beverage applications, our ingredient portfolio offers you new ideas and the creativity to develop your next innovation.



www.iclfood.com | 1-855-ICL-SPEC | foodexperts@icl-group.com 

©2015 ICL Food Specialties. A division of ICL Performance Products. All rights reserved.

Make This Your **Go-To App** for the Meeting and for Real-Time Updates

Why use the app? Same content plus more features than the Program Book. Quick. Easy to use. Supports our green effort for the environment.

Here are the key features:

- **Customize** your schedule and add appointments.
- **Check** the program schedule, posters, and general information.
- **Access** session information, including full abstracts.
- **Create** your personal schedule and to-do lists.
- **Review** exhibitor list and booth numbers.
- **Receive** announcements.
- **Contact** poster authors to schedule an appointment in addition to poster author time.
- **Take** notes in the app and then e-mail the notes to yourself or others.
- **Send** messages and appointment requests to fellow attendees.

Download Now.

It's Fast, Easy, and Free!

Available for iOS (iPhone and iPad) and Android devices; Blackberry and Windows phone users have access to a mobile website that will offer the same functionality. **Search the app store for AACCI 2015; or go to mobileapp.aaccnet.org for the app store links and mobile website link.**



Thank You 2015 AACCI Centennial and Centennial Meeting Sponsors

LEADERSHIP CIRCLE



SUSTAINING LEVEL



Enzyme Development Corporation®

CONTRIBUTING LEVEL



ADDITIONAL SPONSORS



SESSION & WORKSHOP SPONSORS

Bayer CropScience, LP
Ingredion Inc.
Medallion Labs/General Mills, Inc.

Merieux Nutrisciences
National Osteoporosis Foundation

STUDENT PRODUCT DEVELOPMENT COMPETITION SPONSORS

Ardent Mills
Frito-Lay Inc.

General Mills
Ingredion Inc.
Kellogg Co.

Starquest F.O.O.D. Consulting LLC
TIC Gums Inc.

BEST STUDENT RESEARCH PAPER COMPETITION SPONSORS

B.C. Williams Food Products
Cain Food Industries, Inc.
Cargill
Corbion

Frito-Lay Inc.
General Mills
The Mennel Milling Co.
The Mitsubishi International Food
Ingredients

Mother Murphy's Flavors
Starquest F.O.O.D. Consulting LLC
TIC Gums Inc.

Total Dietary Fiber



The Integrated Total Dietary Fiber kit developed by Megazyme is the basis of AOAC Methods 2009.01 and 2011.25. These methods have been improved and are available as the Rapid Integrated Total Dietary Fiber method (K-RINTDF)

Mushroom Beta-Glucan



Megazyme “Yeast and Mushroom” Beta-Glucan Kit (K-YBGL) evaluated and recommended by NAMMEX www.nammex.com/redefining-medicinal-mushrooms

Megazyme

Excellence in Analytical Methodology!

Lactose in “low lactose” products

Megazyme lactose kit (K-LACGAR) is the only enzyme method which gives accurate lactose determination in low lactose products. The method incorporates chemical removal of free glucose and galactose in the sample together with rapid measurement of lactose with patented technology.



α -Amylase in Sprout Damaged Grain

A new α -amylase kit from Megazyme (K-AMYLS) allows rapid measurement of trace levels of α -amylase in grain and food products in both “manual” and “automated” formats. Ideal where sensitivity, rapidity, accuracy and reputability are important!



GENERAL INFORMATION

Registration Hours

Mezzanine Level Lobby, CC

Sunday, October 18	2:00 – 7:00 p.m.
Monday, October 19	7:30 a.m. – 6:30 p.m.
Tuesday, October 20	7:30 a.m. – 6:00 p.m.
Wednesday, October 21	7:30 a.m. – 2:30 p.m.

Speaker Ready Room

Sunday, October 18	2:00 – 7:00 p.m.
Monday, October 19	7:00 a.m. – 5:30 p.m.
Tuesday, October 20	7:00 a.m. – 5:30 p.m.
Wednesday, October 21	7:00 a.m. – 12:00 p.m.

Exhibition Hall—Exhibit and Poster Hours

Hall A, CC

Sunday, October 18

2:00 – 6:00 p.m. Exhibitor Set-Up

Monday, October 19

7:00 – 9:00 a.m. Exhibitor Set-Up
7:00 – 11:00 a.m. Poster Set-Up by Authors
12:00 – 2:00 p.m. Grand Opening Exhibition – Exhibits, Posters, and Lunch with Chef Demonstrations
12:00 – 7:00 p.m. Poster Viewing
4:00 – 6:00 p.m. Exhibits Open
4:00 – 6:00 p.m. Poster Viewing with Authors
Student Poster Authors Present (4:00 – 4:30 p.m.)
Poster Authors Present (odd-numbered posters 4:30 – 5:45 p.m.)

Tuesday, October 20

10:00 a.m. – 7:00 p.m. Poster Viewing
12:00 – 2:00 p.m. Exhibits, Posters, and Lunch with Chef Demonstrations
4:00 – 6:00 p.m. Exhibits Open
4:00 – 6:00 p.m. Poster Viewing with Authors
Poster Authors Present (even-numbered posters 4:15 – 5:30 p.m.)

Wednesday, October 21

8:30 – 10:00 a.m. Exhibits, Poster Viewing, and Coffee
10:30 a.m. – 12:30 p.m. Exhibit and Poster Take-Down

Looking for Breakfast, Lunch, Beverages, or Snack? Try Dunn Brothers Coffee Shop

Located in the Convention Center (Main Level)

Breakfast and lunch items, coffee, specialty coffee drinks, beverages, and more are available daily from 7:00 a.m. to 5:00 p.m.

Open Meeting Room

An open meeting room is available in the Convention Center for groups up to 20 people. Sign up at the Registration Desk located in the Mezzanine Level Lobby at the Convention Center.

Photo and Video Release

Photographs and video will be taken at the 2015 AACC International Centennial Meeting. By attending this meeting, you agree to allow AACCI's use of your photo or captured video in any AACCI publications, website, meeting and/or society promotions.

Medical Emergencies

The nearest medical facility is:

Hennepin County Medical Center

701 Park Avenue
Minneapolis, MN 55415
612.873.3000

Safety Tips

- Do not travel alone—stay in groups and travel in well-lit areas.
- Remove name badges when outside the hotel and Convention Center unless you are participating in an annual meeting event.
- Do not give your room number out to anyone you do not know and avoid giving out your room number in conversations that strangers may overhear.
- Bolt your hotel room door and only open it when you know who is on the other side. (Note: Hotel personnel wear uniforms and have identification badges. If in doubt, call hotel security or the front desk to verify an employee's identity.)
- Do not leave your door ajar if you are going down the hall for ice. Someone may enter when you are not looking.
- Know where the stairs are located in case of a fire. Do not use elevators. Also, count the number of doors to the nearest exit in case you cannot see in a smoke-filled hallway.
- Valuables, airline tickets, and money should be kept in a hotel safety deposit box or in a room safe, if available.

Procedures in Case of a Fire in the Hotel

- Do not take the elevator when you smell smoke or if you know that there is a fire in the building.
- Leave the hotel as quickly as possible. If you cannot, stay in your room and call the operator or security to let them know you are in your room.
- Place your hand on the room door to see if it is hot before opening it. If it is, do not open it quickly. Open it just a crack to see what is on the other side and be prepared to shut it quickly if necessary.
- If you leave your room, take your room key with you. Shut your room door to keep smoke out. You may have to return if the exit is blocked. Remember the way back to your room as you go to the exit in case you need to return.
- If necessary, drop to your knees to avoid smoke. Tie a wet towel around your nose and mouth to act as a smoke filter.

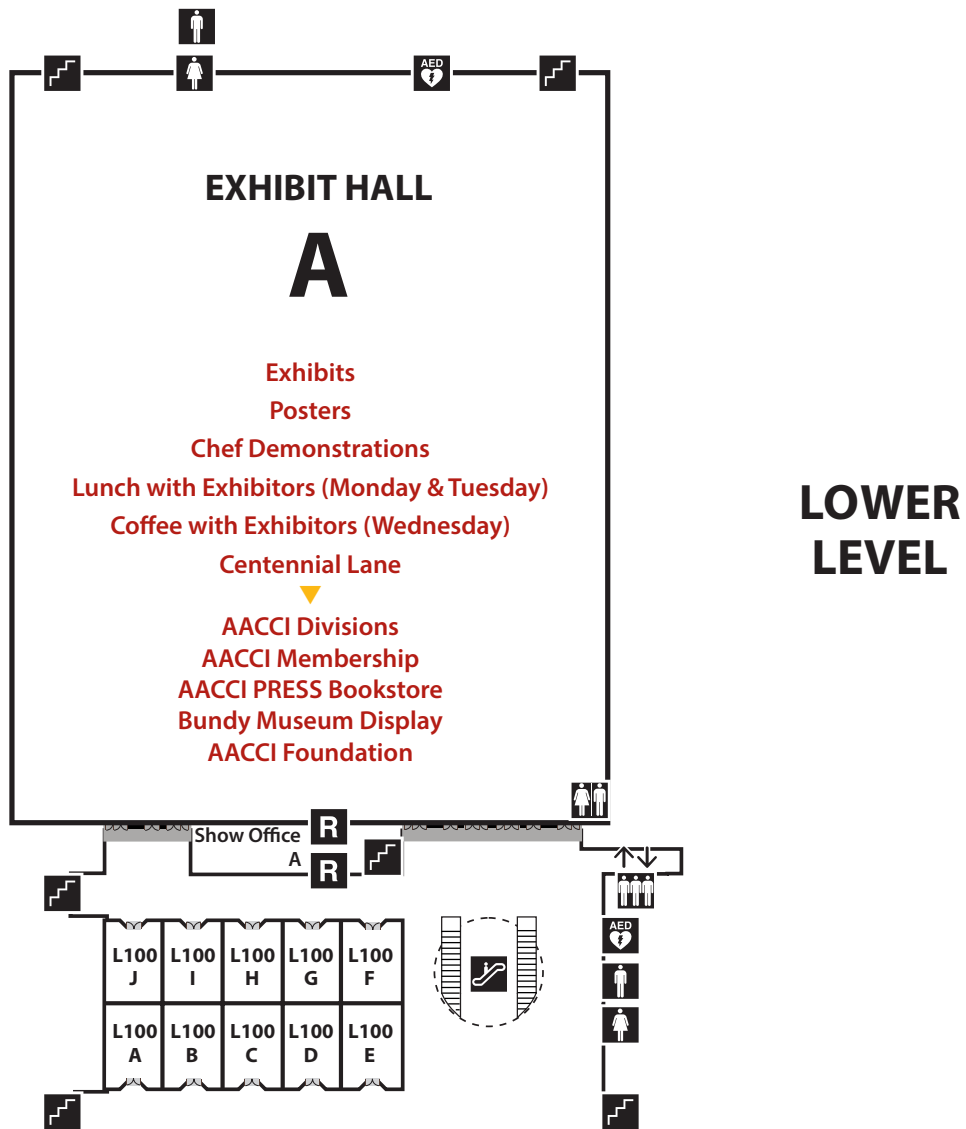
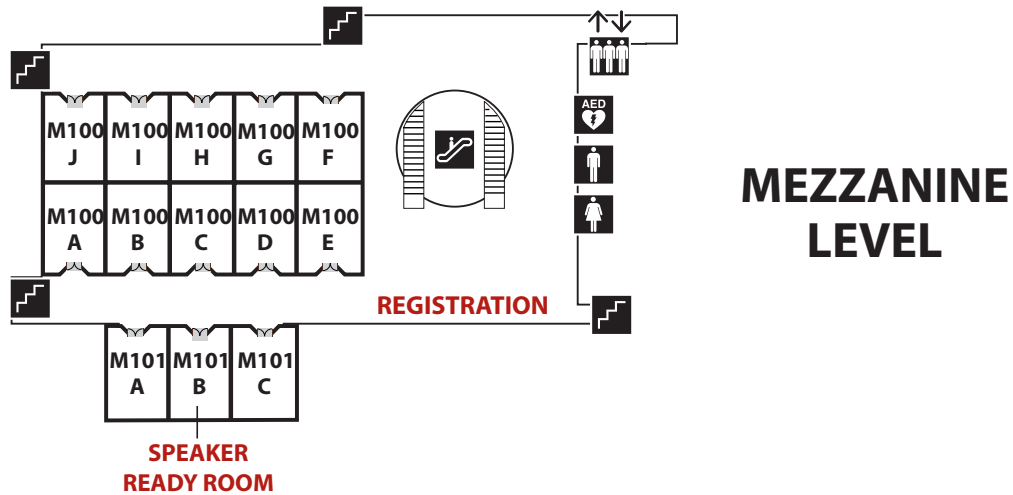
Our Science, Our Future

Walter Bushuk, 1976 AACCI President

“World population is growing and the natural resources to feed that population are shrinking. A large portion of the world's population already face nutritional deficits. Agricultural science, and cereal science in particular, will be critical to finding technical solutions to this problem.”

MINNEAPOLIS CONVENTION CENTER

1301 Second Avenue South



HILTON MINNEAPOLIS

1001 Marquette Avenue South

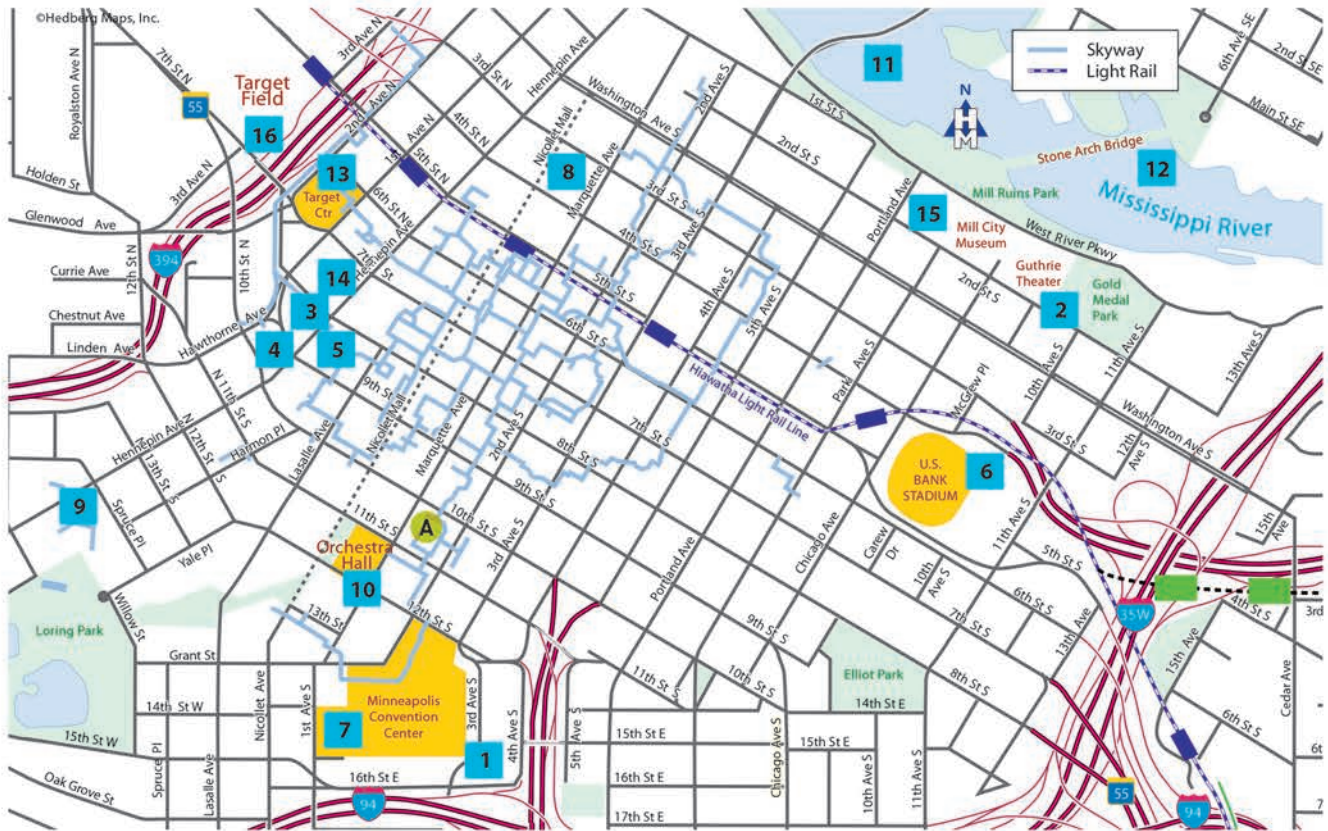


SECOND FLOOR



THIRD FLOOR

DOWNTOWN MINNEAPOLIS - HOTEL & POINTS OF INTEREST



AACCI HOTEL

A. Hilton Minneapolis

MEETING FACILITIES ADDRESSES

Minneapolis Convention Center

1301 Second Avenue South

Hilton Minneapolis

1001 Marquette Avenue South

POINTS OF INTEREST

1. Children's Theatre/Mpls Institute of Arts
2. Guthrie Theater
3. Brave New Workshop Improv Theater
4. Historic Orpheum Theatre
5. Historic State Theatre
6. U.S. Bank Stadium
7. Minneapolis Convention Center
8. Minneapolis Central Library
9. Minneapolis Sculpture Garden/Walker Art Center
10. Orchestra Hall
11. Paradise Charter Cruises
12. Stone Arch Bridge
13. Target Center
14. Pantages Theatre
15. Mill City Museum
16. Target Field

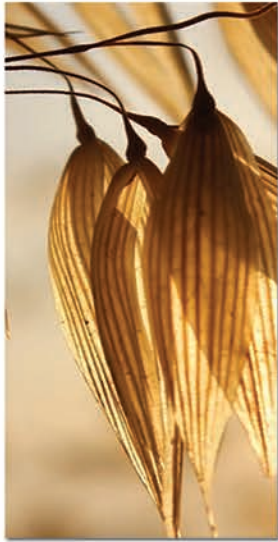


GRAIN MILLERS

Whole Grains, Wholesome Values.

Congratulating the AACCI on
100 years!

AACC
INTERNATIONAL



- Oats
- Oat Fibers
- Wheat
- Rye
- Barley
- Corn
- Flax Seed
- Soybeans
- Ancient Grains
- And much more...
- ✓ 9 Operating Locations
- ✓ Import/Export Capabilities
- ✓ Custom Milling & Blending
- ✓ Specialty Fibers & Flours
- ✓ Application Development



West Coast: 800.443.8972
Midwest & Canada: 800.232.6287

grainmillers.com

SCIENTIFIC SESSIONS-AT-A-GLANCE

All sessions listed are held at the Minneapolis Convention Center (CC) or Hilton Hotel.

Saturday, October 17			
9:00 a.m. – 4:00 p.m.	Pre-Meeting Workshop: How to Be A ‘Savvy Consumer’ of Proficiency Data in the Next Generation • Offsite – Mill City Museum		
Sunday, October 18			
2:00 – 5:00 p.m.	Pre-Meeting Workshop: Recent Advances on Enzymes in Baked Goods • Marquette I-II (Hilton)	Pre-Meeting Workshop: Technologies for Mitigating Scab (DON, Vomitoxin) in Grain Lots • Marquette VI (Hilton)	
6:30 – 9:30 p.m.	Opening Centennial Celebration • Ballroom AB (CC)		
Monday, October 19			
8:30 – 10:00 a.m.	Opening General Session, Awards with Keynote Speaker Jack Uldrich • Grand Ballroom A-D (HILTON)		
10:30 a.m. – 12:10 p.m.	Symposium: Koushik Seetharaman Memorial Symposium on New Aspects of Starch Structure and Granule Architecture • M100AB (CC)	Symposium: Sustainability, Genetics, and Future Cultivars-Impact on the Food Chain • M100DE (CC)	Technical: Flavor, Aroma, and Texture of Grain-Based Foods • M100FG (CC)
12:00 – 2:00 p.m.	Grand Opening Exhibition – Exhibits, Posters, and Lunch with Chef Demonstrations • Hall A (HILTON)		
1:30 – 4:00 p.m.	Student Product Development Competition • L100IJ (CC)		
2:00 – 3:45 p.m.	Science Café: Little Beans, Big Opportunities: The Farm to Market Story of Dry Bean Ingredients • M100AB (CC)	Science Café: New Frontiers—Dietary Fiber Methodology, Gaining Perspective on a Complex Issue • M100DE (CC)	Hot Topic: Impacts of New Global Standards for DON on Management and Supply of Cereal Grains • M100FG (CC)
2:00 – 3:50 p.m.	Supplier Innovation Session I • L100G (CC)		
2:00 – 4:30 p.m.	Science on the Move Session: Extrusion and Value-Added Grain Processing • Offsite - Buhler		
4:00 – 6:00 p.m.	Poster Viewing with Authors (4:00 – 4:30 p.m. student authors; 4:30 – 5:45 p.m. authors of odd-numbered posters) Hall A (CC)		
Tuesday, October 20			
8:30 – 10:00 a.m.	Plenary Session, Awards with Keynote Speaker Mehmood Khan • Grand Ballroom A-D (HILTON)		
10:30 – 11:40 p.m.	Supplier Innovation Session II • L100G (CC)		
10:30 a.m. – 12:10 p.m.	Symposium: Emerging Technologies and Applications to Cereals, Grains and Flours: The Next 100 Years • M100AB (CC)	Symposium: Sprouted Grains: Paving the Way to Nutritious and Safe Products • M100DE (CC)	Technical: Cereal Dietary Fiber Properties and Fermentation • M100FG (CC)
12:00 – 2:00 p.m.	Exhibits, Posters and Lunch with Chef Demonstrations • Hall A (CC)		
2:00 – 3:45 p.m.	Special Session: Foresight & Innovation: Using the Future to Innovate Today • L100BC (CC)	Science Café: Establishing Dietary Reference Intakes for Bioactives: Cereal Grains Focus • M100AB (CC)	Hot Topic: A New Vision for Grain Science – Grain Science for 2025 • M100DE (CC)
2:00 – 3:50 p.m.	Supplier Innovation Session III • L100G (CC)		
2:00 – 4:15 p.m.	Hot Topic: FSMA in Action • L100F (CC)		
2:00 – 4:30 p.m.	Best Student Paper Competition • L100H (CC)	Science on the Move Session: Extrusion and Value-Added Grain Processing • Offsite - Buhler	
4:00 – 6:00 p.m.	Poster Viewing with Authors (4:15 – 5:30 p.m. authors of even-numbered posters)		
Wednesday, October 21			
8:30 – 10:00 a.m.	Exhibits, Poster Viewing and Coffee • Hall A (CC)		
10:20 a.m. – 12:00 p.m.	Symposium: Agents of Change and Dealing with the Unknowns of the Future • M100AB (CC)	Symposium: Pulse Ingredients in Cereal Food Processing • M100DE (CC)	Technical: Functionality of Cereal Components • M100FG (CC)
1:30 – 3:45 p.m.	Science on the Move Session: Extrusion and Value-Added Grain Processing • Offsite - Buhler		
1:45 – 3:30 p.m.	Science Café: Gluten in Cereal-Based Foods—Benefits and Risks • M100AB (CC)	Hot Topic: Wheat – A Nutritious Grain Over a Century of Plant Breeding • M100DE (CC)	Hot Topic: Federal Nutrition Policy: What’s New and What’s Next? • M100FG (CC)
4:00 – 5:30 p.m.	Closing Session, Awards, with Keynote Speaker Valeri Lantz-Gefroh • Grand Ballroom A-D (HILTON)		

INNOVATION AND NETWORKING OPPORTUNITIES

EXPANDED EXHIBIT HALL

In addition to the exhibits and posters, we've expanded the Exhibit Hall – making it the place to be during the meeting. Whether taking in a chef demo, checking out information on the divisions, browsing through the latest in books, or looking for a place to sit down and relax...this is “the place to be”.

★ Chef Demonstrations

Join All-Star Grain Chefs Tim Christensen, Cargill; Michael Hollerman, InHarvest; Jim Kyndberg, Radisson Blu Hotel; and Cookbook Author Robin Asbell as they prepare one of their favorite grain-based recipes right before your eyes – including tasty samples. See pages 23 and 31 for more information.

★ Bundy Baking Museum Display

Enjoy a unique journey through time and tradition as you view a selection of turn-of-the-century baking equipment and memorabilia provided by the Bundy Baking Museum.

★ Join the AACCI Divisions

Stop by the Division Connection displays in the Exhibit Hall throughout the meeting. Learn more about the history of each specialization and connect with representatives from each division to find out how to get involved.

★ Take Charge of Your Membership

Are you looking for ways to be more involved in AACCI? Stop by the membership area during exhibit hours to renew your membership or enroll in Auto-Renew; learn about the activities of the AACCI Foundation and how you can support our young scientists; and sign up to volunteer and engage in AACCI.

★ Networking Nooks

Relax and connect with colleagues in the expanded conversation areas located throughout the Exhibit Hall.

★ Browse AACCI PRESS Bookstore

Check out the AACCI PRESS Bookstore, which features a collection of new titles, new book signings, demos of the latest online publishing efforts, and more! Buy 3 books and get shipping – plus your choice of book in our popular Ingredient Handbook series—FREE. First 100 customers get a free AACCI commemorative cereal box filled with surprise gift (purchase required)!

DISCOVER APPROVED METHODS COMMITTEE MEETINGS

Attend one or more of the 21 Approved Methods Technical Committee meetings and connect with your scientific area. These meetings are open to everyone and provide a great way to connect with colleagues.

Monday, October 19

7:00 – 8:30 a.m.

Bread Baking Methods	Board Room 1, Hilton
Food Safety and Microbiology	Directors Row 1, Hilton
Pasta Products Analysis	Directors Row 2, Hilton
Protein and Enzyme Methods	Directors Row 3, Hilton
Rice Milling and Quality	Board Room 3, Hilton
Soft Wheat and Flour Products	Rochester, Hilton
Statistical Advisory	Directors Row 4, Hilton

Tuesday, October 20

7:00 – 8:30 a.m.

Dietary Fiber and Other Carbohydrates	Rochester, Hilton
Experimental Milling	Directors Row 1, Hilton
Methods for Grain and Flour Testing	Directors Row 2, Hilton
Molecular Biomarkers for Grain	Directors Row 3, Hilton
Oat and Barley Products	Directors Row 4, Hilton
Vitamins, Minerals, and Lipids	Board Room 3, Hilton
Yeast Evaluation	Board Room 2, Hilton

Wednesday, October 21

7:00 – 8:30 a.m.

Asian Products	Duluth, Hilton
Bioactive Compounds Methods	Duluth, Hilton
Chemical Leavening Agents	Directors Row 1, Hilton
Physical Testing Methods	Directors Row 2, Hilton
Pulse and Legume	Directors Row 4, Hilton
Spectroscopic Methods	Directors Row 3, Hilton

Our Science, Our Future

James L. Vetter, 1986 AACCI President

“As a professional society representing individuals with a commitment to utilizing sound science and technology in providing food to an expanding population, AACCI will have increasing opportunity to influence decision makers in industry, academia, and government by maintaining and, where possible, expanding its programs and efforts to provide information based on this science and technology that will encourage the production, marketing, and consumption of healthy food and diets.”

**DIVISIONS,
SECTIONS,
ALUMNI
MEETINGS,
AND EVENTS**

➤ *Network with attendees who specialize in specific subject areas, work in various geographic locations, or are fellow alumni by participating in these meetings, events, and socials. Check at the Registration Desk for availability and to purchase tickets. Preregistration is required. (CC)—Minneapolis Convention Center*

SATURDAY, OCTOBER 17

6:30 – 9:00 p.m. Cincinnati Section Meeting and Dinner *Offsite – Rock Bottom Brewery*

SUNDAY, OCTOBER 18

4:00 – 6:00 p.m. Milling & Baking Division Executive Committee and Advisory Board Meeting Board Room 3, Hilton

4:30 – 6:00 p.m. Student Association Executive Committee and University Representative Meeting Board Room 2, Hilton

MONDAY, OCTOBER 19

5:30 – 6:00 p.m. Carbohydrate Division Executive Committee Meeting M101A (CC)
 5:30 – 6:30 p.m. Rheology Leadership Team Planning Meeting M100H (CC)
 6:00 – 7:00 p.m. Carbohydrate Division Meeting L100BC (CC)
 6:00 – 7:00 p.m. Northwest Section Reception* Skywater Lounge, Hilton
 7:00 – 9:30 p.m. Cereals&Europe Section Dinner*† *Offsite – Rock Bottom Brewery*
 7:00 – 10:00 p.m. Student Association Social and Dinner*† *Offsite – Brit's Pub*

TUESDAY, OCTOBER 20

7:00 – 8:00 a.m. Grains for Health Foundation Breakfast Meeting* Marquette V, Hilton
 10:30 a.m. – 12:00 p.m. Student Association Business Meeting L100IJ (CC)
 6:00 – 7:00 p.m. Biotechnology Division Business Meeting M100H (CC)
 6:00 – 7:00 p.m. Protein Division Business Meeting M101A (CC)
 6:30 – 9:30 p.m. Carbohydrate Division Dinner*† *Offsite – Windows on Minnesota*
 9:00 – 10:30 p.m. “Up All Night – Get Wired and Connect at a Reception with AACCI’s Milling & Baking Division” Duluth Room, Hilton

WEDNESDAY, OCTOBER 21

7:00 – 8:15 a.m. Kansas State University Breakfast* L100BC (CC)
 7:30 – 8:30 a.m. North Dakota State University Alumni Breakfast*† *Offsite – The News Room*
 12:00 – 1:30 p.m. Engineering & Processing Division Meeting and Lunch* M100I (CC)
 12:00 – 1:30 p.m. ICC Luncheon* M100H (CC)
 12:00 – 1:30 p.m. Milling & Baking Division Meeting and Networking Lunch* L100BC (CC)
 12:00 – 1:30 p.m. Nutrition Division Meeting and Lunch* M100J (CC)
 12:00 – 1:30 p.m. Rheology Division Meeting and Lunch* L100I (CC)
 12:00 – 1:30 p.m. Rice Division Lunch* L100G (CC)

* Preregistration – ticket required

† Walking distance from Convention Center



INTRODUCING THE MOST DESIRED INGREDIENT IN BARS

ALMONDS

When consumers were asked in a recent study to create their "ideal" bar, they chose almonds as their top ingredient*. It's no surprise really—almonds contain 6 grams of protein and 4 grams of fiber per serving, and deliver a satisfying crunch that would make any bar a favorite among today's consumers. Learn more at Almonds.com/bars.

 **california
almonds**[®]
Almonds.com

© 2015 Almond Board of California. All rights reserved.

Scientific evidence suggests, but does not prove, that eating 1.5 ounces per day of most nuts, such as almonds, as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. One serving of almonds (28g) has 13g of unsaturated fat and only 1g of saturated fat. *Sterling-Rice Group, U.S. Bars Exploratory Study, 2014.

DAILY MEETING SCHEDULE AND SESSIONS

Meetings take place at the **Minneapolis Convention Center (CC)** unless otherwise noted.

SATURDAY, OCTOBER 17

<p>9:00 – 11:00 a.m. 9:00 a.m. – 4:00 p.m.</p>	<p>Finance Committee Meeting Workshop: How to Be a ‘Savvy Consumer’ of Proficiency Data in the Next Generation*† Board of Directors Meeting Cincinnati Section Meeting and Dinner†</p>	<p>Duluth Room, Hilton <i>Offsite – Mill City Museum</i></p> <p>Duluth Room, Hilton <i>Offsite – Rock Bottom Brewery, 800 LaSalle Plaza</i></p>
--	---	---

* *ticket required*
† *offsite location*

SATURDAY DAILY HIGHLIGHTS

PREMEETING WORKSHOP

How to Be a ‘Savvy Consumer’ of Proficiency Data in the Next Generation

9:00 a.m. – 4:00 p.m.

Take a detailed look at the various aspects of a quality management system, including calibration, sample planning tools, measurement uncertainty, statistical approaches, proficiency tracking, root cause analysis, lab accreditation, and more. Check Sample program samples will be used to illustrate these topic areas. Attendees will have the opportunity to access experts and ask questions about laboratory proficiency data and the quality management process, not only from a technical standpoint, but also in terms of managing the certification process. *Preregistration required.*

Our Science, Our Future

Stuart A. S. Craig, 2005 AACCI President

“AACCI plays a key role in generating and communicating science on the health benefits of grains. In particular, genetics and bioinformatics will provide new information across the value chain – from plant breeders (grain quality) to individual consumers (personalized nutrition). This will create opportunities for AACCI stakeholders.”

AACCI Centennial Activities

Step Back and Look to the Future



The AACCI Centennial Activities will be on display in the Exhibit Hall. Step back in time and take an interactive cruise through the Centennial Timeline. Then look to the future while watching our members share what trends will be important in the future of cereal grain science.

DAILY MEETING SCHEDULE AND SESSIONS

Meetings take place at the *Minneapolis Convention Center (CC)* unless otherwise noted.

SUNDAY, OCTOBER 18

8:00 – 11:00 a.m.	Tennis Tournament†	<i>Offsite — U of MN Baseline Tennis Center</i>
8:30 – 11:00 a.m.	Board of Directors Meeting (<i>continued</i>)	Duluth Room, Hilton
11:00 a.m. – 12:30 p.m.	<i>Cereal Chemistry</i> Editorial Board Luncheon	Marquette III, Hilton
11:00 a.m. – 1:30 p.m.	Check Sample Committee Meeting	Directors Row 1, Hilton
12:30 – 2:30 p.m.	Food Safety, Quality, and Regulatory Committee (FSQRC) Meeting	Board Room 1, Hilton
1:00 – 2:00 p.m.	Books Committee Meeting	Board Room 3, Hilton
2:00 – 3:30 p.m.	Approved Methods Technical Committee Chairs Meeting	Marquette V, Hilton
2:00 – 4:00 p.m.	2015/2016 Technical Program Planning – Team Leaders Meeting	M101A (CC)
2:00 – 5:00 p.m.	Workshop: Recent Advances on Enzymes in Baked Goods*	Marquette I–II, Hilton
2:00 – 5:00 p.m.	Workshop: Technologies for Mitigating Scab (DON, Vomitoxin) in Grain Lots*	Marquette VI, Hilton
2:00 – 6:00 p.m.	Exhibitor Set-Up	Hall A (CC)
2:00 – 7:00 p.m.	Registration Open	Mezzanine Lobby (CC)
2:00 – 7:00 p.m.	Speaker Ready Room Open	M101B (CC)
2:30 – 4:30 p.m.	Foundation Board Meeting	Directors Row 4, Hilton
4:00 – 6:00 p.m.	Milling & Baking Division Executive Committee/Advisory Board Meeting	Board Room 3, Hilton
4:30 – 6:00 p.m.	Student Association Executive Committee and University Representative Meeting	Board Room 2, Hilton
6:30 – 9:30 p.m.	Opening Centennial Celebration*	Ballroom AB (CC)

* ticket required

† offsite location



Superior flavor and performance in every batch.

BeneGrain brings you the very best in sprouted wheat performance. Our meticulously controlled germination process transforms whole wheat - creating a better-tasting option that satisfies you and your customers.

- Exceptional baking performance
- Reduced need for malted barley flour and vital wheat gluten
- Less bitterness means adding less sugar
- Whole grain nutrition that's easily digested
- Available in conventional and organic



A Trusted Family of Ingredients.

For more information on our products, call 1-800-553-5687 or visit www.baystatemilling.com

© Copyright 2015

SUNDAY DAILY HIGHLIGHTS

PREMEETING WORKSHOPS

Recent Advances on Enzymes in Baked Goods

2:00 – 5:00 p.m.

Enzymes are one of the four commonly used dough conditioner additives to help improve the quality of the finished baked goods by altering chemical and physical interactions. The importance of enzymes has been increased as consumers demand “clean label” products which are free of chemical additives. This workshop will bring the professionals from enzyme industry and academia who are the leaders of the latest developments in enzyme applications in baked goods. *Preregistration required.*

Technologies for Mitigating Scab (DON, Vomitoxin) in Grain Lots

2:00 – 5:00 p.m.

The mitigation of DON in wheat lots using optical sorting and other cleaning technologies for removing *Fusarium*-damaged kernels will be explored in this workshop. The speakers will provide an overview on the prevalence of scab worldwide and the research underway for the past 30 years in breeding and control, describe the engineering challenges and successes of developing high-speed optical sorters for scab, and present the elevator and/or miller’s perspective experiences of using optical sorters with or without gravity separators for removing scabby kernels. *Preregistration required.*

Opening Centennial CELEBRATION!

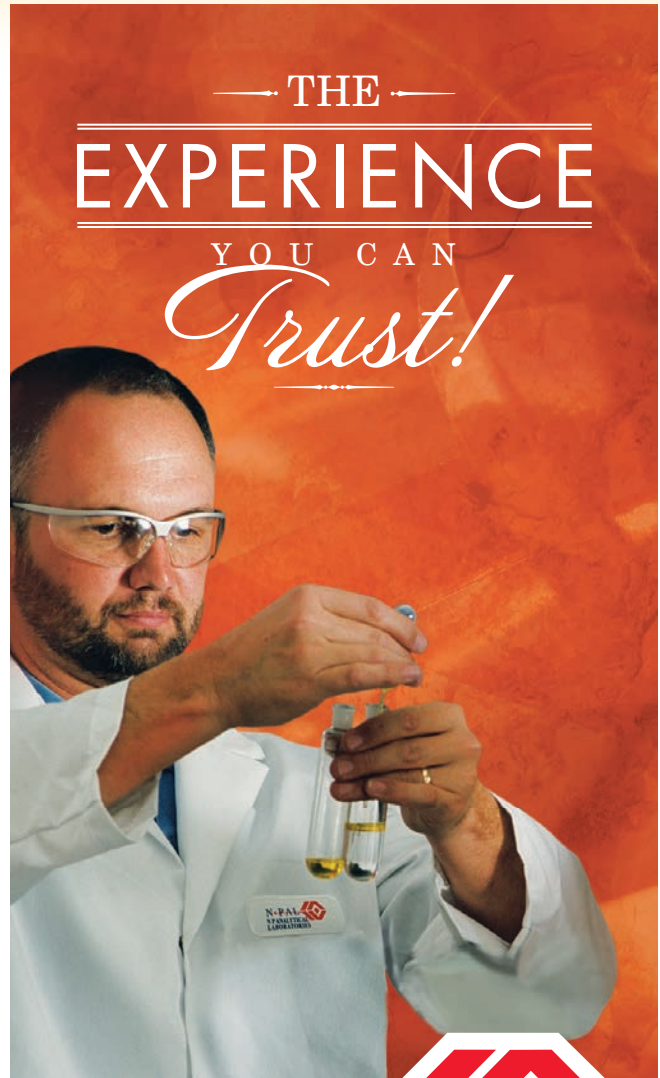
6:30 – 9:30 p.m.

It’s a Party! Pay tribute to 100 years of AACCI at a fun and relaxing Opening Reception where old and new friends can connect, eat, drink, and enjoy local entertainment.

Our Science, Our Future

Fred Hegele, 1998 AACCI President

“The future holds 1) uncertainty and 2) opportunity for AACCI and the cereal grains community. The world needs good science and great scientists who can interpret and speak practical, understandable language. The scientific community needs metrics and standards to forge a common basis for conversations and decisions. And importantly, we all need a process for attracting, educating, and nurturing bright young minds to carry on (and improve) what has been started. In my humble opinion, AACCI is the BEST platform to do all of the above. And while we learn from history let us have the courage to use it so as to continuously improve.”



— THE —
EXPERIENCE
 YOU CAN
Trust!



Testing for the Food & Feed Industry

Our technical and customer service staff averages over 20 years of experience ensuring you:

- The right testing protocol for your food and feed analysis
- The most cost-effective solution (only the tests you need)
- A personal commitment to work in partnership with you

Put us to the test.

800-423-6832

www.npal.com

DAILY MEETING SCHEDULE AND SESSIONS

Meetings take place at the Minneapolis Convention Center (CC) unless otherwise noted.

MONDAY, OCTOBER 19

7:00 – 8:30 a.m.	Approved Methods Technical Committee Meetings <ul style="list-style-type: none"> • Bread Baking Methods • Food Safety and Microbiology • Pasta Products Analysis • Protein and Enzyme Methods • Rice Milling and Quality • Soft Wheat and Flour Products • Statistical Advisory 	Board Room 1, Hilton Directors Row 1, Hilton Directors Row 2, Hilton Directors Row 3, Hilton Board Room 3, Hilton Rochester, Hilton Directors Row 4, Hilton
7:00 – 9:00 a.m.	Exhibitor Set-Up	Hall A (CC)
7:00 – 11:00 a.m.	Poster Set-Up by Authors	Hall A (CC)
7:00 a.m. – 5:30 p.m.	Speaker Ready Room Open	M101B (CC)
7:30 a.m. – 6:30 p.m.	Registration Open	Mezzanine Lobby (CC)
8:30 – 10:00 a.m.	Opening General Session, Awards, and Keynote Speaker Jack Uldrich	Grand Ballroom A-D, HILTON
10:00 a.m. – 12:00 p.m.	AACCI PRESS Bookstore	Lower Level Lobby (CC)
10:30 a.m. – 12:10 p.m.	Scientific Sessions <ul style="list-style-type: none"> • Flavor, Aroma, and Texture of Grain-Based Foods – <i>Technical</i> • Health Promoting Properties of Grain Bioactives – <i>Technical</i> • Koushik Seetharaman Memorial Symposium on New Aspects of Starch Structure and Granule Architecture – <i>Symposium</i> • Methods in Flour and Dough Quality – <i>Technical</i> • Quality and Physical Properties of Grains – <i>Technical</i> • Sustainability, Genetics, and Future Cultivars – Impact on the Food Chain – <i>Symposium</i> 	M100FG (CC) L100D (CC) M100AB (CC)
12:00 – 2:00 p.m.	Grand Opening Exhibition, Posters, and Lunch with Chef Demonstrations <i>Expanded hall includes: Exhibitors, Posters, and Centennial Lane featuring Division Connection; Membership; AACCI PRESS Bookstore, Bundy Museum display; Chef Demonstrations (see daily highlights for featured chefs and schedule)</i>	Hall A (CC)
12:00 – 7:00 p.m.	Poster Viewing	Hall A (CC)
1:30 – 4:00 p.m.	Student Product Development Competition Presentations	L100IJ (CC)
2:00 – 3:45 p.m.	Scientific Sessions <ul style="list-style-type: none"> • Impacts of New Global Standards for DON on Management and Supply of Cereal Grains – <i>Hot Topic</i> • Little Beans, Big Opportunities: The Farm to Market Story of Dry Bean Ingredients – <i>Science Café</i> • New Frontiers – Dietary Fiber Methodology, Gaining Perspective on a Complex Issue – <i>Science Café</i> • The Future of Oats and Barley in Processing and Health – <i>Symposium</i> • The Past as a Prologue to the Future of Milling and Baking – <i>Symposium</i> 	M100FG (CC) M100AB (CC) M100DE (CC)
2:00 – 3:10 p.m.	Supplier Innovation Session I (see page 26) 2:00 – 2:30 p.m. Florida Food Products 2:40 – 3:10 p.m. CHOPIN Technologies	L100D (CC) L100F (CC) L100G (CC)
2:00 – 4:00 p.m.	AACCI PRESS Bookstore	Lower Level Lobby (CC)
2:00 – 4:30 p.m.	Science On the Move Session: Extrusion and Value-Added Grain Processing*† <i>(preregistration required – bus departs Convention Center front entrance 2:00 p.m.)</i>	<i>Offsite – Buhler</i>
4:00 – 6:00 p.m.	Exhibits and Centennial Lane Open	Hall A (CC)
4:00 – 6:00 p.m.	Poster Viewing with Authors <i>Student Poster Authors Present (4:00 – 4:30 p.m.) Poster Authors Present (odd-numbered posters, 4:30 – 5:45 p.m.)</i>	Hall A (CC)
5:30 – 6:00 p.m.	Carbohydrate Division Executive Committee Meeting	M101A (CC)
5:30 – 6:30 p.m.	Rheology Leadership Team Planning Meeting	M100H (CC)
6:00 – 7:00 p.m.	Carbohydrate Division Meeting	L100BC (CC)
6:00 – 7:00 p.m.	Northwest Section Reception*	Skywater Lounge, Hilton
7:00 – 9:30 p.m.	Cereals&Europe Section Dinner*†	<i>Offsite – Rock Bottom Brewery 800 LaSalle Plaza</i>
7:00 – 10:00 p.m.	Student Association Social and Dinner*†	<i>Offsite – Brit's Pub, 1110 Nicollet Mall</i>

*ticket required • †offsite location – walking distance unless otherwise noted

MONDAY DAILY HIGHLIGHTS

Opening General Session, Awards, and Keynote Speaker Jack Uldrich, Futurist

(Note: This session is held at the HILTON HOTEL)
8:30 – 10:00 a.m.

The 2015 AACCI Centennial Meeting formally commences with our Opening General Session! Look back at the advancements in the field of cereal grain science and the accomplishments of AACCI over the past 100 years. We will also acknowledge our past presidents and award the 2015 AACCI Alsberg-French-Schoch Memorial Lectureship, Thomas Burr Osborne Medal, the AACCI International Fellows, and the surprise William F. Geddes Memorial Award.

Experience that “light bulb moment” for your organization during keynote speaker **Jack Uldrich’s presentation, “The Big AHA: How to Future-Proof Your Business Against Tomorrow’s Transformational Trends – Today.”**

Jack Uldrich, Global Futurist, Speaker, Author



Jack Uldrich is a renowned global futurist and the best-selling author of eleven books. He is a frequent guest on national media and regularly appears on the Science Channel’s television program, “FutureScape” and the Discovery Channel show “Inside Out.” He is a prolific speaker on technology, change management, and leadership and has addressed Fortune 100 corporations, venture capital firms, associations, not-for-profit organizations, and state and regional governments on five continents.

Our Science, Our Future

Dick Hahn, 1988 AACCI President

“Cereal grains will continue to be the basis for feeding the 9 billion people expected in the world in 2050. AACCI is at the heart and pulse of the cereal grains industry. Our programs will continue to train scientists, allow them to communicate through our journals, websites, meetings, symposia, and meet face to face at the annual meetings. Our role is critical to the advancement of the cereal grains industry now as well as in the future.”

Grand Opening Exhibition, Posters, and Lunch with Chef Demonstrations

12:00 – 2:00 p.m.

Enjoy lunch as you explore innovation in our expanded Exhibit Hall. Network with colleagues, reconnect with friends, visit with more than 100 of the industry’s leading suppliers, view research posters, check out Centennial Lane, and learn more about AACCI’s innovations.

Chef Demonstrations

Watch our All-Star Grain Chefs as they prepare one of their favorite grain recipes....a limited amount of samples will be available!

Stage 1 – Chef Robin Asbell, Cookbook Author

12:00 – 12:20 p.m.; repeated 1:00 – 1:20 p.m.

Stage 2 – Chef Tim Christensen, Cargill

12:30 – 12:50 p.m.; repeated 1:30 – 1:50 p.m.



Robin Asbell is an author, educator, and chef whose lifelong passion for whole, natural foods has fueled a successful career in creating delicious dishes and recipes that both please the palate and nourish the body. Her new book (August 2015), *Whole Grain Promise*, is a down to earth and accessible guide to making whole grains a part of your life. Her recipes can be found at robinasbell.com.



Tim Christensen has more than 40 years of baking experience, with the last 13 years in Cargill’s bakery applications group. Chef Tim is certified by the RBA as a Master Baker, one of approximately 200 in North America. His work experience includes small retail bakeries, restaurants, in-store bakeries, wholesale bakeries, and convention centers both as a baker and pastry chef. All this stemming from his first job working in his family’s bakery.

Student Product Development Competition

1:30 – 4:00 p.m. Competition Presentations

4:00 – 4:30 p.m. Poster Presentations

Support our up-and-coming scientists as they present their innovative ideas in a grain-based food product development competition. Then join them later at their posters in the Exhibit Hall.

Exhibits and Poster Viewing with the Authors

4:00 – 6:00 p.m.

4:00 – 4:30 p.m. Student Poster Authors

4:30 – 5:45 p.m. Odd-Numbered Poster Authors

Don’t miss this opportunity to meet poster authors and ask them questions about their research.

MONDAY MORNING SCIENTIFIC SESSIONS

(listed in alphabetical order by title)

Session number (1-S) and technical number (1-O) refer to the Author Index in the Program Book.

Find complete details on the meeting website at aacnet.org/meetings/annual/ScientificProgram/Pages/ScientificSessions

(CC) refers to Convention Center.

Flavor, Aroma, and Texture of Grain-Based Foods • Technical • M100FG (CC)

Scientific Initiative: Chemistry & Interactions

Moderators: Hanyu Yangcheng, Iowa State University, Ames, IA, U.S.A.; Jiahui Chen, General Mills, Minneapolis, MN, U.S.A.

10:30 a.m. • 1-O

A comparative aroma analysis of intermediate wheatgrass and whole wheat bread crusts. K. A. SNEDDON (1), A. A. Amann (1), D. G. Peterson (1). (1) University of Minnesota, St. Paul, MN, U.S.A.

10:50 a.m. • 2-O

Flavor and texture improvement in whole grain biscuits. L. HAYNES (1), B. Zhao (1), O. Herrera-Gomez (1), S. Gabriel (1). (1) Mondelez International, East Hanover, NJ, U.S.A.

11:10 a.m. • 3-O

Examining wheat (*Triticum aestivum*) genetics using mouse (*Mus musculus*) flavor preference and discrimination. A. M. KISZONAS (1), P. E. Fuerst (2), C. F. Morris (3). (1) USDA-ARS WWQL, Pullman, WA, U.S.A.; (2) Crop and Soil Sciences, Washington State University, Pullman, WA, U.S.A.; (3) USDA-ARS, Pullman, WA, U.S.A.

11:30 a.m. • 4-O

Modelling oral deconstruction of bread and cereal foods during chewing. L. Chaunier (1), G. DELLA VALLE (2), S. Guessasma (1), L. Hedjazi (1), F. Le Bleis (3). (1) INRA, Nantes, France; (2) INRA, Nantes Cedex 3, France; (3) Food Development, Nantes, France

11:50 a.m. • 5-O

Starch behavior in organic solvents: Could this elucidate key structure features of the granule? A. F. BROEGGER (1), N. Koganti (1), S. Hill (1). (1) University of Nottingham, Loughborough, United Kingdom

Health Promoting Properties of Grain Bioactives • Technical • L100D (CC)

Scientific Initiative: Health & Nutrition

Moderators: Satya Jonnalagadda, Kerry, Beloit, WI, U.S.A.; Haibo Huang, University of Illinois, Urbana, IL, U.S.A.

10:30 a.m. • 6-O

Biologically active rice bran peptides obtained under simulated human digestion condition. C. G. URAIPONG (1), J. Zhao (2). (1) The University of New South Wales, Kensington, Australia; (2) The University of New South Wales, Kensington, NSW, Australia

10:50 a.m. • 7-O

The effects of corn fractions on cardiovascular risk factors in low density lipoprotein receptor knockout mice. K. MASISI (1), T. Beta (2), K. Le (3), M. H. Moghadasian (3). (1) Department of Food Science, & Richardson Centre for Functional Foods and Nutraceuticals, University of Manitoba, Winnipeg, MB, Canada; (2) Department of Food Science, & Richardson Centre for Functional Foods and Nutraceuticals, University of Manitoba, Winnipeg, MB, Canada; (3) Department of Human

Nutritional Sciences and Canadian Centre for Agri-Food Research in Health and Medicine, University of Manitoba, Winnipeg, MB, Canada

11:10 a.m. • 8-O

Effect of roasting on phenolics content and antioxidant activity of proso millet. F. HAN (1), L. Zheng (2), W. Di (1), Y. Liang (1), X. Chen (1), A. Li (1). (1) Academy of State Administration of Grain, P.R. China, Beijing, China; (2) School of Food Science and Technology, Jiangnan University, Wuxi, China

11:30 a.m. • 9-O

Distribution of minerals in wheat (*Triticum aestivum* L.) grains and in their milling fractions as affected by pearling. N. DE BRIER (1), S. V. Gomand (2), E. Donner (3), D. Paterson (4), E. Lombi (3), E. Smolders (2), J. A. Delcour (2). (1) KU Leuven, Leuven, Belgium; (2) KU Leuven, Leuven, Belgium; (3) University of South Australia, Adelaide, Australia; (4) Australian Synchrotron, Melbourne, Australia

11:50 a.m. • 10-O

Interaction between cereal beta-glucan and gastric mucin. L. Ringier (1), P. Fischer (1), L. NYSTRÖM (1). (1) ETH Zurich, Zurich, Switzerland

Koushik Seetharaman Memorial Symposium on New Aspects of Starch Structure and Granule Architecture • Symposium • M100AB (CC)

Scientific Initiative: Chemistry & Interactions

Organizers: Bruce Hamaker, Purdue University, West Lafayette, IN, U.S.A.; Teri Paeschke, Cargill Texturizing Solutions, North America, Wayzata, MN, U.S.A.; Amy Lin, University of Idaho & Washington State University, Moscow, ID, U.S.A.

Moderators: Amy Lin, University of Idaho & Washington State University, Moscow, ID, U.S.A.; Bruce Hamaker, Purdue University, West Lafayette, IN, U.S.A.; Varatharajan Vamadevan, University of Guelph, Guelph, ON, Canada

Sponsor: Carbohydrate Division

10:30 a.m. • 1-S

A few words about Koushik Seetharaman as a person and researcher. B. HAMAKER (1). (1) Purdue University, West Lafayette, IN, U.S.A.

10:50 a.m. • 2-S

Starch molecular structure. E. BERTOFT (1), (1) Åbo Akademi University, Turku, Finland

11:10 a.m. • 3-S

Starch in breadmaking: From wheat to wheat flour over dough to fresh and stored bread. J. A. DELCOUR (1). (1) Katholieke Universiteit Leuven, Belgium

11:30 a.m. • 4-S

Koushik's group work on starch structure and properties relationships. V. VAMADEVAN (1), E. Bertoft (1), Z. Fan (1), F. Chauhan (1), R. Waduge (1), K. Nantanga (1), D. Kalinga (1), G. Annor (1), G. Peymanpour (1), J. Gayin (1), A. Goldstein (1). (1) University of Guelph, Guelph, ON, Canada

11:50 a.m. • 5-S

Starch and its nutritional quality. A. H. M. LIN (1), B. R. Hamaker (2). (1) Bi-State School of Food Science, University of Idaho and Washington State University, Moscow, ID, U.S.A.; (2) Whistler Center for Carbohydrate Research, Dept. Food Science, Purdue University, West Lafayette, IN, U.S.A.

Methods in Flour and Dough Quality • Technical • L100F (CC)*Scientific Initiative: Quality & Analytical Methods***Moderators:** M. Hikmet Boyacioglu, Okan University, Istanbul, Turkey; Rui Liu, Chinese Academy of Agriculture Sciences, Beijing, China**10:30 a.m. • 11-O**

The bubble size distribution and its evolution in wheat flour doughs investigated by synchrotron x-ray microtomography. F. KOKSEL (1), S. Aritan (2), A. Strybulevych (1), J. H. Page (1), M. G. Scanlon (3). (1) University of Manitoba, Winnipeg, MB, Canada; (2) Biomechanics Research Group, Faculty of Sports Sciences, Hacettepe University, Ankara, Turkey; (3) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada

10:50 a.m. • 12-O

Rapid measurement of grain and flour quality using a new falling number analyser. M. BASON (1). (1) Perten Instruments AB, Hagersten, Sweden

11:10 a.m. • 13-O

Monitoring changes in crust and crumb of cakes after baking: Relation to their microstructures. N. HESSO (1), P. Le-Bail (2), C. Loisel (1), S. Chevallier (1), A. Marti (3), K. Seetharaman (3), A. Le-Bail (1). (1) ONIRIS, Nantes, LA, France; (2) INRA, Nantes, LA, France; (3) University of Minnesota, St. Paul, MN, U.S.A.

11:30 a.m. • 14-O

Study on the water state and distribution of noodle dough using NMR and DSC. Y. M. WEI (1), R. Liu (1), L. Wu (1), Y. Zhang (1), B. Zhang (1). (1) Institute of Agro-Products Processing Science and Technology, CAAS, Beijing, China

11:50 a.m. • 15-O

Influence of flour particle size distribution on the farinograph absorption of Canadian hard red winter wheats. H. SAPIRSTEIN (1), Y. Wu (1), R. Graf (2). (1) University of Manitoba, Winnipeg, MB, Canada; (2) AAFC Lethbridge Research Centre, Lethbridge, AB, Canada

Quality and Physical Properties of Grains • Technical • L100H (CC)*Scientific Initiative: Engineering & Processing***Moderators:** Ting Liu, University of Minnesota, St. Paul, MN, U.S.A.; Mike Gidley, University of Queensland, St. Lucia, QLD, Australia**10:30 a.m. • 16-O**

Implications of one-pass drying of rice with industrial microwave on milling quality. G. ATUNGULU (1), D. L. Smith (1), S. Rogers (2). (1) The University of Arkansas, Fayetteville, AR, U.S.A.; (2) AMTek Microwaves, Cedar Rapids, IA, U.S.A.

10:50 a.m. • 17-O

Impact of soft kernel texture on milling properties and flour quality of durum wheat (*Triticum turgidum*). J. C. MURRAY (1), A. M. Kiszonas (1), J. D. Wilson (2), C. F. Morris (1). (1) Western Wheat Quality Laboratory, Pullman, WA, U.S.A.; (2) USDA Grain Quality and Structure Research Unit, Manhattan, KS, U.S.A.

11:10 a.m. • 18-O

Engineering high alpha-amylase levels in wheat grain lowers Falling Number but improves baking properties. J. P. F. RAL (1), A. Whan (1), O. Larroque (1), J. Pritchard (2), E. Leyne (1), C. Howitt (1), M. Newberry (1). (1) CSIRO Agriculture Flagship, Canberra, Australia; (2) CSIRO Agriculture Flagship, Canberra, Australia

11:30 a.m. • 19-O

Effects of chemical leavening systems on the opacity of whole wheat flour tortillas. T. LIU (1), G. G. Hou (2), S. L. Book (3), L. Marquart (4). (1) University of Minnesota, St. Paul, MN, U.S.A.; (2) Wheat Marketing Center, Portland, OR, U.S.A.; (3) ICL Food Specialties, St. Louis, MO, U.S.A.; (4) University of Minnesota, Saint Paul, MN, U.S.A.

11:50 a.m. • 20-O

Milling operational efficiency compared via endosperm quantitative spectroscopic chemical imaging of 81,920 pixels. D. L. WETZEL (1), M. D. Boatwright (1). (1) Kansas State University, Manhattan, KS, U.S.A.

Sustainability, Genetics, and Future Cultivars—Impact on the Food Chain • Symposium • M100DE (CC)*Scientific Initiative: Biotechnology & Sustainability***Organizers:** Ray Shillito, Bayer CropScience, Morrisville, NC, U.S.A.; Ravi Chibbar, University of Saskatoon, Saskatoon, SK, Canada**Moderators:** Anne Bridges, AACCC International, St. Paul, MN, U.S.A.; Ray Shillito, Bayer CropScience, Morrisville, NC, U.S.A.**Sponsors:** Molecular Biomarkers for Grain Technical Committee, Biotechnology Division**Financial Sponsor:** Bayer CropScience, LP**10:30 a.m. • 6-S**

Introduction to modern breeding technologies. R. SHILLITO (1). (1) Bayer CropScience, Durham, NC, U.S.A.

10:50 a.m. • 7-S

Application of modern plant breeding methods to crop improvement. A. VAN DEYNZE (1). (1) University of California, Davis, CA, U.S.A.

11:10 a.m. • 8-S

Genomic technology meets the field—prospects for wheat improvement. C. POZNIAK (1). (1) University of Saskatchewan, Saskatoon, SK, Canada

11:30 a.m. • 9-S

Quality management from the bin to the box. S. HOOD (1). (1) General Mills, Minneapolis, MN, U.S.A.

11:50 a.m. • 10-S

Supply chain adjustments, identity preservation, and purity challenges. J. STITZLEIN (1). (1) Consolidated Grain and Barge, Chesterfield, MO, U.S.A.

Our Science, Our Future

Bill Atwell, 1993 AACCI President

“Grain science has got to play a major role in the future. Population continues its exponential growth while world food production grows linearly at best. This is a critical issue and increasing grain production is a primary means of addressing it. We will need all the tools in the toolbox and the grain science industry will be the focal point for supplying them.”

MONDAY AFTERNOON SCIENTIFIC SESSIONS

(listed in alphabetical order by title)

Session number (1-S) and technical number (1-O) refer to the Author Index in the Program Book.

Find complete details on the meeting website at aacnet.org/meetings/annual/ScientificProgram/Pages/ScientificSessions

(CC) refers to Convention Center.

Impacts of New Global Standards for DON on Management and Supply of Cereal Grains • Hot Topic • M100FG (CC)

Organizers: Anne Bridges, AACCI, St. Paul, U.S.A.; Andrea Bianchini, University of Nebraska, Lincoln, NE, U.S.A.; Glen Weaver, Ardent Mills, Omaha, NE, U.S.A.

Sponsor: Food Safety and Microbiology Committee

- Background on DON and global occurrence. A. BIANCHINI (1). (1) University of Nebraska, Lincoln, NE, U.S.A.
- Canada—Impact on domestic supplies and trade. S. TITTEMIER (1). (1) Canadian Grain Commission, Winnipeg, MB, Canada
- USA wheat and milling practices (cleaning and distribution). B. BOROUGHS (1). (1) North American Millers' Association (NAMA), Washington, DC, U.S.A.
- Update on the Codex status for DON and impacts on trade. A. BRIDGES (1). (1) AACCI International, St. Paul, MN, U.S.A.
- Discussion—Where to from here? G. WEAVER (1). (1) Ardent Mills, Omaha, NE, U.S.A.

Little Beans, Big Opportunities: The Farm to Market Story of Dry Bean Ingredients • Science Café • M100AB (CC)

Scientific Initiatives: Biotechnology & Sustainability, Food Safety & Regulatory, Health & Nutrition, Ingredients & Innovations

Organizers: Janice Rueda, ADM, Decatur, IL, U.S.A.; Mike Grusak, USDA-ARS, Houston, TX, U.S.A.

Moderator: John Finley, USDA-ARS, Beltsville, MD, U.S.A.

Sponsor: Pulse and Legume Committee

- 11-S** Advances in U.S. dry bean production: Sustainable nutrition, GMO-free. M. A. GRUSAK (1). (1) USDA-ARS Children's Nutrition Research Center, Houston, TX, U.S.A.
- 12-S** Agriculture as an instrument of public health: The potential of dry beans. H. J. THOMPSON (1). (1) Colorado State University, Fort Collins, CO, U.S.A.
- 13-S** Whole bean ingredients: Where do they fit on MyPlate? J. RUEDA (1). (1) ADM Edible Bean Specialties, Inc., Decatur, IL, U.S.A.
- 14-S** Little beans, big opportunities: The Beanitos story. D. COSTELLO (1). (1) Beanitos, Austin, TX, U.S.A.

SUPPLIER INNOVATION SESSIONS

Monday, October 19

Supplier Innovation Session I

L100G (CC)

2:00 – 2:30 p.m.

Company Name: Florida Food Products
Name of Product: FiberGel LC
Contact Person: Edgar Anders
Presenter's Name: Edgar Anders
Presentation Category: Ingredients

Use of FiberColloid™ baker technology.
FiberGel LC: THE single ingredient solution for EGG Replacement. Label friendly, Non-GMO, Natural, and Allergen-Free.

2:40 – 3:10 p.m.

Company Name: CHOPIN Technologies
Name of Product: AlveoLab
Contact Person: Valentine Veysiere
Presenter's Name: Gregory Vericel
Presentation Category: Instruments/Equipment/Services

The new Alveograph is not only a great QC tool but also has new useful features for research and development.

Tuesday, October 20

Supplier Innovation Session II

L100G (CC)

10:30 – 11:00 a.m.

Company Name: Baker Perkins
Name of Product: Extruder Producing Sheeted Doughs

Contact Person: Kari Patton
Presenter's Name: Brett Cutler
Presentation Category: Instruments/Equipment/Services

Extruders producing sheeted doughs present bakers the opportunity to explore savory and sweet snacks with different textures and ingredient profiles.

11:10 – 11:40 p.m.

Company Name: Best Cooking Pulses, Inc.
Name of Product: BEST Pulse Flours and Fibers

Contact Person: Margaret Hughes
Presenter's Name: Margaret Hughes
Presentation Category: Ingredients

BEST Whole Pulse Flours provide clean label protein and fiber fortification for breads, pizza crust, batters/breading, and baked goods.

Supplier Innovation Session III

L100G (CC)

2:00 – 2:30 p.m.

Company Name: Bay State Milling
Name of Product: Micro-safe Grains, Flours and Seeds

Contact Person: Colleen Zammer
Presenter's Names: Jessica Aldridge and Vanessa Brovelli
Presentation Category: Ingredients

Ingredients with validated 5-log reduction were developed combining Sensory Analysis with technology to ensure high organoleptic acceptance for RTE foods.

2:40 – 3:10 p.m.

Company Name: QvalySense AG
Name of Product: QSorter Explorer
Contact Person: Iva Cerna
Presenter's Name: Francesco Dell'Endice
Presentation Category: Instruments/Equipment/Services

High-speed and high-accuracy single-kernel analysis and sorting of oats by biochemical and geometrical properties using Machine Vision and NIR Spectroscopy.

New Frontiers—Dietary Fiber Methodology, Gaining Perspective on a Complex Issue • Science Café • M100DE (CC)

Scientific Initiatives: Food Safety & Regulatory, Health & Nutrition, Quality & Analytical Methods

Organizers: Jonathan DeVries, Medallion Laboratories/General Mills, Golden Valley, MN, U.S.A.; Stuart Craig, DuPont, Somers, NY, U.S.A.

Moderators: Stuart Craig, DuPont, Somers, NY, U.S.A.; David Plank, Medallion Labs, Minneapolis, MN, U.S.A.

Sponsors: Dietary Fiber and Other Carbohydrates, Carbohydrates Division

15-S Improvements to the Codex-definition dietary fiber methods. D. W. PLANK (1), A. Hammers (1), D. Schmiegl (1). (1) Medallion Labs, Minneapolis, MN, U.S.A.

16-S Considerations for simulating human digestion in vitro. B. R. HAMAKER (1). (1) Whistler Center for Carbohydrate Research, Dept. of Food Science, Purdue University, West Lafayette, IN, U.S.A.

17-S Food labeling of dietary fiber. P. TRUMBO (1). (1) US Food and Drug Administration, College Park, MD, U.S.A.

The Future of Oats and Barley in Processing and Health •

Symposium • L100D (CC)

Scientific Initiatives: Engineering & Processing, Health & Nutrition, Quality & Analytical Methods

Organizers: Kelly Henderson, Richardson Milling, Portage la Prairie, MB, Canada; Nancy Ames, Agriculture and Agri-Food Canada, Winnipeg, MB, Canada

Moderators: Nancy Ames, Agriculture and Agri-Food Canada, Winnipeg, MB, Canada; Lindsey Mullenbach, Grain Millers, St. Ansgar, IA, U.S.A.

Sponsor: Oats and Barley Technical Committee

2:00 p.m. • 18-S

Strategies to enhance health benefits of oat and barley beta-glucan. N. AMES (1), S. Thandapilly (2), Y. Wang (3), J. Storsley (2). (1) Agriculture and Agri-Food Canada (AAFC), Winnipeg, MB, Canada; (2) Agriculture and Agri-Food Canada, Winnipeg, MB, Canada; (3) University of Manitoba, Winnipeg, MB, Canada

2:20 p.m. • 19-S

Monitoring beta glucan viscosity throughout food processes: Quality control approach. T. GAMEL (1). (1) Guelph Food Research Centre- Agriculture and Agri-Food Canada, Guelph, ON, Canada

2:40 p.m. • 20-S

Effect of heat treatments on safety and nutritional properties of whole grain barley. L. BOYD (1), R. Holley (2), N. Ames (3). (1) Agriculture and Agri-Food Canada/University of Manitoba,

Winnipeg, MB, Canada; (2) University of Manitoba, Winnipeg, MB, Canada; (3) Agriculture and Agri-Food Canada, Winnipeg, MB, Canada

3:00 p.m. • 21-S

Effects of light pearling on the physical grain characteristics and composition of selected Canadian barley varieties. L. M. Casper (1), L. MALCOLMSON (2), M. Izydorczyk (3). (1) Food Development Centre, Portage la Prairie, MB, Canada; (2) LM FoodTech Solutions, Winnipeg, MB, Canada; (3) Grain Research Laboratory - Canadian Grain Commission, Winnipeg, MB, Canada

3:20 p.m. • 22-S

QSorter: A fast and repeatable method based on NIR and VISION to remove gluten impurities from cereals. F. Dell'Endice (1), F. DELL'ENDICE (1). (1) QualySense, Glattbrugg, Switzerland

The Past as a Prologue to the Future of Milling and Baking •

Symposium • L100F (CC)

Scientific Initiative: Engineering & Processing

Organizer: Arthur Bettge, ADB Wheat Consulting, Moscow, ID, U.S.A.

Moderator: Theresa Cogswell, BakerCogs Inc., Overland Park, KS, U.S.A.

Sponsors: Milling and Baking Division, Soft Wheat and Flour Products Technical Committee, Chemical Leavening Technical Committee

2:00 p.m. • 23-S

Chemical leavening history and development by forward thinking chemists in the 1800s. D. JORDAN (1). (1) Kudos Blends, Kidderminster, United Kingdom

2:20 p.m. • 24-S

Trans-fat functionality and replacement with functional, economic alternatives. L. MOREHART (1). (1) Cargill, Plymouth, MN, U.S.A.

2:40 p.m. • 25-S


Wheat breeding for functionality and grading: Differences among requirements and the effect in the marketplace. K. GARLAND-CAMPBELL (1). (1) USDA ARS Wheat Genetics, Quality, Physiology and Disease Research Unit, Pullman, WA, U.S.A.

3:00 p.m. • 26-S

How labels went from simple to complex and are now returning to clean, minimal ingredient lists. T. COGSWELL (1). (1) BakerCogs, Inc., Overland Park, KS, U.S.A.


3:20 p.m. • 27-S

The art and science behind the creation of *Modernist Cuisine*. S. SWANE (1). (1) Modernist Cuisine, Bellevue, WA, U.S.A.




Stop by during exhibit hours to renew your membership, enroll in auto-renew, join AACCI, or sign up to volunteer and win AACCI prizes! Also, take a moment to wave hello to your colleagues from around the world through our live online feed while charging your mobile device.


RENEW




AUTO-RENEW



JOIN



VOLUNTEER



DAILY MEETING SCHEDULE AND SESSIONS

Meetings take place at the Minneapolis Convention Center (CC) unless otherwise noted.

TUESDAY, OCTOBER 20

7:00 – 8:00 a.m.	Past Presidents Breakfast	Board Room 1, Hilton
7:00 – 8:30 a.m.	Approved Methods Technical Committee Meetings	
	<ul style="list-style-type: none"> • Dietary Fiber and Other Carbohydrates • Experimental Milling • Methods for Grain and Flour Testing • Molecular Biomarkers for Grain (formerly Biotechnology Methods) • Oat and Barley Products • Vitamins, Minerals, and Lipids • Yeast Evaluation 	Rochester, Hilton Directors Row 1, Hilton Directors Row 2, Hilton Directors Row 3, Hilton Directors Row 4, Hilton Board Room 3, Hilton Board Room 2, Hilton
7:00 a.m. – 5:30 p.m.	Speaker Ready Room Open	M101B (CC)
7:30 a.m. – 6:00 p.m.	Registration Open	Mezzanine Lobby (CC)
8:30 – 10:00 a.m.	Plenary Session and Awards with Keynote Speaker Dr. Mehmood Khan	Grand Ballroom A-D, HILTON
10:00 a.m. – 12:00 p.m.	AACCI PRESS Bookstore	Lower Level Lobby (CC)
10:00 a.m. – 7:00 p.m.	Poster Viewing	Hall A (CC)
10:30 a.m. – 11:40 a.m.	Supplier Innovation Session II (see page 26)	L100G (CC)
	10:30 – 11:00 a.m. Baker Perkins	
	11:10 – 11:40 a.m. Best Cooking Pulses, Inc.	
10:30 a.m. – 12:00 p.m.	Student Association Business Meeting	L100IJ (CC)
10:30 a.m. – 12:10 p.m.	Scientific Sessions	
	<ul style="list-style-type: none"> • Cereal Dietary Fiber Properties and Fermentation – <i>Technical</i> • Digestive Properties of Starch – <i>Technical</i> • Emerging Technologies and Applications to Cereals, Grains and Flours: The Next 100 Years – <i>Symposium</i> • Enzymes to Improve Cereal Quality – <i>Technical</i> • New Approaches to Gluten-Free Foods – <i>Technical</i> • Sprouted Grains:Paving the Way to Nutritious and Safe Products – <i>Symposium</i> 	M100FG (CC) L100D (CC) M100AB (CC)
12:00 – 2:00 p.m.	Exhibits, Lunch, and Poster Viewing with Chef Demonstrations	L100F (CC)
	<i>Expanded hall includes: Exhibitors, Posters, and Centennial Lane featuring Division Connection, Membership, AACCI PRESS Bookstore, Bundy Museum display, Chef Demonstrations (see daily highlights for featured chefs and schedule)</i>	L100H (CC)
2:00 – 3:30 p.m.	Division Leadership Council (DLC) Meeting	M100DE (CC)
2:00 – 3:45 p.m.	Scientific Sessions	Hall A (CC)
	<ul style="list-style-type: none"> • A New Vision for Grain Science – Grain Science for 2025 – <i>Hot Topic</i> • Establishing Dietary Reference Intakes for Bioactives: Cereal Grains Focus – <i>Science Café</i> • Foresight & Innovation: Using the Future to Innovate Today – <i>Special Session with Andy Hines, Assistant Professor & Program Coordinator, University of Houston Foresight Program</i> • Nutrition for the Future: Filling the Protein Gaps from Cereal and Legume Proteins – <i>Symposium</i> • Reflecting on the Past Century and the Role of Asian Market & Products – Where to from Now! – <i>Symposium</i> 	M101A (CC) M100DE (CC) M100AB (CC) L100BC (CC)
2:00 – 3:10 p.m.	Supplier Innovation Session III (see page 26)	M100FG (CC)
	2:00 – 2:30 p.m. Bay State Milling	
	2:40 – 3:10 p.m. QualySense AG	
2:00 – 4:00 p.m.	AACCI PRESS Bookstore	L100D (CC)
	Scientific Sessions (continued)	L100G (CC)
2:00 – 4:15 p.m.	<ul style="list-style-type: none"> • FSMA in Action – <i>Hot Topic</i> • Best Student Research Paper Competition 	Lower Level Lobby (CC)
2:00 – 4:30 p.m.	Science On the Move Session: Extrusion and Value-Added Grain Processing*†	L100F (CC)
2:00 – 4:30 p.m.	<i>(pre-registration required – bus departs Convention Center front entrance 2:00 p.m.)</i>	L100H (CC)
3:30 – 5:00 p.m.	China Strategies Task Force Meeting	Offsite – Buhler
4:00 – 6:00 p.m.	Exhibits and Centennial Lane Open	Board Room 2, Hilton
4:00 – 6:00 p.m.	Poster Viewing with Authors	Hall A (CC)
	<i>Poster Authors Present (even-numbered posters, 4:15 – 5:30 p.m.)</i>	Hall A (CC)
4:30 – 5:30 p.m.	Professional Development Panel Meeting	M101A (CC)

5:30 – 7:00 p.m.	Milling and Baking Division/AACCI Foundation Student and Young Professional Development Grant Meeting	L100G (CC)
6:00 – 7:00 p.m.	Biotechnology Division Business Meeting	M100H (CC)
6:00 – 7:00 p.m.	Protein Division Business Meeting	M101A (CC)
6:00 – 7:30 p.m.	Speed Mentoring Social*	M100IJ (CC)
6:30 – 9:30 p.m.	Carbohydrate Division Dinner*†	<i>Offsite – Windows on Minnesota</i> 50th Floor, IDS Tower 710 Marquette Ave. S. Duluth, Hilton
9:00 – 10:30 p.m.	“Up All Night – Get Wired and Connect at a Reception with AACCI’s Milling and Baking Division” <i>Open to all attendees. Stop by for a complimentary Irish Coffee, chat with long-time scientists, early career professionals, and students in this informal setting. The perfect way to end your day. Contributing to event is the AACCI Foundation.</i>	

*ticket required

†offsite location – walking distance unless otherwise noted

NEW! Your Enhanced Guide to Achieving Food Safety Systems Compliance in the Grains Industry!

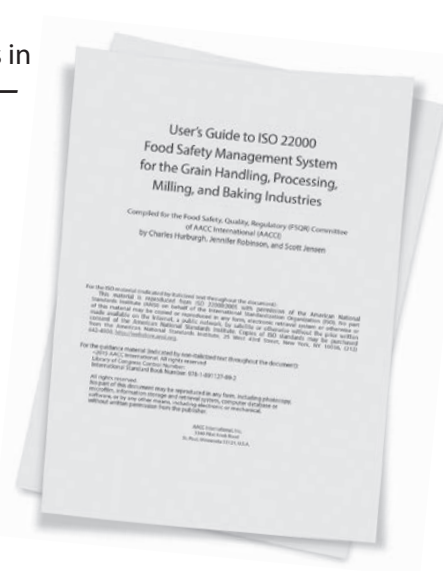


This new custom AACCI publication provides all the requirements in the **“ISO 22000 First edition Food Safety Management Systems—Requirements for Any Organization in the Food Chain”** AND SO MUCH MORE!

AACCI has added special sections that impart knowledge and experience from compliance experts in the grain handling, processing, and milling and baking industries.

This important new guideline document helps you:

- Interpret general food safety standards as they apply to the grains industry
- Learn best practices for setting up and maintaining a compliant grain-food safety program
- Understand the dos and don’ts when preparing for audits and dealing with auditors



Attend one of two events to learn more about using this guidance document in your food safety program.

ISO 22000 Guidance Document Overview – A web-based tool from AACCI

Tuesday, Oct. 20 – 3:30 p.m.
Jennifer Robinson, Bay State Milling
(This overview is part of the Hot Topic Session: FSMA in Action which begins at 2:00 p.m. in L100F.)

AACCI Food Safety Committee Demonstration

At the AACCI PRESS Bookstore!
(See bookstore staff for time.)

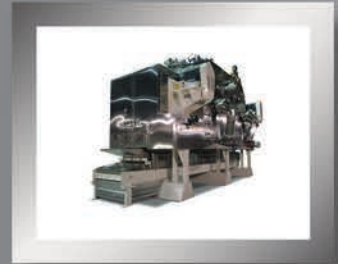
Or purchase and download this document at aacnet.org/iso



WOLVERINE PROCTOR
**ENHANCE YOUR
PRODUCT**



Ultra Sanitary III Dryer



Fluid Bed Dryer



Multiple Conveyor Dryer



Flaking Mills



Shredding & Forming Systems



Rotary Batch Cookers

***Most Sanitary, Energy-efficient Equipment
Available Today***



CPM Wolverine Proctor LLC
251 Gibraltar Road
Horsham, PA 19044
Tel: 215.443.5200 Fax: 215.443.5206
www.wolverineproctor.com
E-mail: sales@cpmwolverineproctor.com

CPM Wolverine Proctor LTD
3 Langlands Avenue
Kelvin South Business Park
East Kilbride, G75 0YG, Scotland
Tel: 44 (0) 1355 575350 Fax: 44 (0) 1355 575351
www.wolverineproctor.co.uk
E-mail: sales@wolverineproctor.co.uk

TUESDAY DAILY HIGHLIGHTS

Plenary Session and Awards with Keynote Speaker Dr. Mehmood Khan, PepsiCo

(Note: This session is held at the HILTON HOTEL)

8:30 – 10:00 a.m.

Hear an overview of what activities AACCI is currently focused on to be a leader in the field of cereal grain science. Applaud several “Faces of the Future” by acknowledging the Excellence in Teaching, Young Scientist Research, and Cecil F. Pinney Travel awardees and discover which team of young scientists is awarded the 2015 Student Product Development Competition award.

Grasp the crucial role grains play in shaping future nutrition trends as keynote speaker **Dr. Mehmood Khan discusses “The Growth of Grains: The Role of Cereal-Based Products in Nourishing a Growing Population.”**

Exhibits, Lunch, and Poster Viewing with Chef Demonstrations

12:00 – 2:00 p.m.

Enjoy lunch as you explore innovation in our expanded Exhibit Hall. Network with colleagues, reconnect with friends, visit with more than 100 of the industry’s leading suppliers, view research posters, check out Centennial Lane, and learn more about AACCI’s innovations.

Chef Demonstrations

Watch our All Star Grain Chefs as they prepare one of their favorite grain recipes...a limited amount of samples will be available!

Stage 1 – Chef Michael Holleman, InHarvest

12:00 – 12:20 p.m.; repeated 1:00 – 1:20 p.m.

Stage 2 – Chef James Kyndberg, Radisson Blu Hotel

12:30 – 12:50 p.m.; repeated 1:30 – 1:50 p.m.



Michael Holleman began his culinary career in independent restaurants, where his interest in specialty and heirloom ingredients was born. As director of InHarvest’s Culinary Team, he is chiefly responsible for shaping the development of new products and introducing new customers to the company’s core products. He’s the primary image-builder with all industries and segments InHarvest serves, working closely with growers, procur-

ers, suppliers, distributors, manufacturers, foodservice operators, chefs, and other partners to deliver meaningful food solutions.

A member of ACF, IFEC, and RCA, he is the current chair of the advisory committee of the Whole Grains Council and is the 2012 recipient of the RCA’s Lifetime Achievement Award.



James Kyndberg is known for his uncanny ability to create food with a taste of place and currently creates gourmet dishes with a modernized twist at FireLake Grill House & Cocktail Bar at Radisson Blu Minneapolis. Paying homage to the state of Minnesota and the Midwestern suppliers, farmers, growers, and producers who make the heartland the epicenter for locality, Chef Kyndberg dedicates his work to sustainable practices in all

Mehmood Khan, M.D., PepsiCo’s Vice Chair and Chief Scientific Officer of Global Research and Development



Dr. Khan oversees the PepsiCo global Performance with Purpose sustainability initiatives, designed to enhance environmental, human, and talent sustainability for the company, and he leads PepsiCo’s research and development efforts, creating breakthrough innovations in food, beverages, and nutrition—as well as delivery, packaging, and

production technology—to capture competitive advantage and drive PepsiCo’s businesses forward. Under Dr. Khan’s stewardship, PepsiCo’s Food For Good (an enterprise within the company that utilizes PepsiCo’s delivery vehicles, warehouse facilities, and management skills to make nutrition accessible for low-income families in the United States) is making a difference in the fight against hunger.

its varied forms. A leader in the Minneapolis culinary community for the past 15 years, Kyndberg has received praise from both local and national media. Kyndberg continues to explore new ways that excite his insatiable appetite to create magic in the kitchen.

Foresight & Innovation: Using the Future to Innovate Today

Featuring **Andy Hines, Assistant Professor & Program Coordinator, University of Houston Foresight Program**

2:00 – 3:45 p.m.



Join Andy in this interactive presentation showing how exploring the future can stimulate innovation in the present. The session kicks off with a module on how futurists map the future and some of the tools they use for aiding innovation. Next, we’ll see how some of those tools were applied to develop a future view of the consumer landscape. We’ll conclude with an overview of nine drivers that could provide the basis for innovative

opportunities in the future and ask for the audience to select what it thinks will be the most influential ones.

Best Student Research Paper Competition

2:00 – 4:30 p.m.

This competition challenges students to demonstrate superior presentation skills, highlights the best research conducted and presented by students, and offers an opportunity for students to interact with the AACCI community at an early stage in their career. This session showcases the top six finalists. A detailed listing of presenters is included on page 37.

Exhibits and Poster Viewing with the Authors

4:00 – 6:00 p.m.

4:15 – 5:30 p.m. *Even-numbered Poster Authors*

Don’t miss this opportunity to meet poster authors and ask them questions about their research.

TUESDAY MORNING SCIENTIFIC SESSIONS

(listed in alphabetical order by title)

Session number (1-S) and technical number (1-O) refer to the Author Index in the Program Book.

Find complete details on the meeting website at aacnet.org/meetings/annual/ScientificProgram/Pages/ScientificSessions

(CC) refers to Convention Center.

Cereal Dietary Fiber Properties and Fermentation • Technical • M100FG (CC)

Scientific Initiative: Health & Nutrition

Moderators: Alecia Kiszonas, USDA-ARS WWQL, Pullman, WA, U.S.A.; Sun Min Kim, University of Illinois, Urbana-Champaign, Urbana, IL, U.S.A.

10:30 a.m. • 21-O

Thomas Burr Osbourne Medal Award - 40 years of dietary fiber research. P. B. AMAN (1). (1) Swedish University of Agricultural Sciences, Department of Food Science, Uppsala, Sweden

22-O WITHDRAWN

11:10 a.m. • 23-O

In vitro fermentation of Xylooligosaccharides from *Miscanthus x giganteus*. M. H. CHEN (1), M. J. Bowman (2), B. S. Dien (2), M. A. Cotta (2), K. S. Swanson (1), T. R. Whitehead (3), G. C. Fahey (1), A. N. Beloshapka (1), L. B. Iten (2), L. L. Bauer (1), K. D. Rausch (1), M. E. Tumbleson (1), V. Singh (1). (1) University of Illinois at Urbana-Champaign, Urbana, IL, U.S.A.; (2) NCAUR, ARS, USDA, Peoria, IL, U.S.A.; (3) NCAUR, ARS, USDA, Urbana, IL, U.S.A.

11:30 a.m. • 24-O

The influence of genotype and environment on arabinoxylans and phenolics of wheat grains. L. COPELAND (1), M. Al-Fadly (1). (1) University of Sydney, Sydney, Australia

Digestive Properties of Starch • Technical • L100D (CC)

Scientific Initiative: Engineering & Processing

Moderators: Trust Beta, University of Manitoba, Winnipeg, MB, Canada; Niels De Brier, KU Leuven, Leuven, Belgium

10:30 a.m. • 25-O

Logarithm of slop analysis for characterising pasta structure reveals starch digestion rate is reduced by gluten network. W. ZOU (1), M. Sissons (2), M. Gidley (3), R. Gilbert (3), F. Warren (3). (1) The University of Queensland, Centre for Nutrition and Food Sciences, Queensland Alliance for Agricultural and Food Innovation, Australia, Brisbane, Australia; (2) NSW Department of Primary Industries, Tamworth Agricultural Institute, Australia, Tamworth, Australia; (3) The University of Queensland, Centre for Nutrition and Food Sciences, Queensland Alliance for Agricultural and Food Innovation, Brisbane, Australia

10:50 a.m. • 26-O

Enhanced starch digestion by disruption of the cellular wall material by xylanases. S. LEE (1), H. Masey O'Neill (2), M. Bedford (3), J. Wiseman (1), S. Hill (1). (1) The University of Nottingham, Nottingham, United Kingdom; (2) AB Vista Feed Ingredients, Marlborough, United Kingdom; (3) AB Vista Feed Ingredients, Marlborough, United Kingdom

millinginfo@richardson.ca

www.richardson.ca

Healthier ingredients that are down to earth



Richardson Milling offers a broad range of oat ingredients including oat groats, flakes, flour and bran. Our value added flaked and expanded whole grain based ingredients are designed to be an integral component in your products. We utilize the very best ingredients to create innovative coated whole grains and granola clusters that meet the unique requirements of our customers. They are specially formulated to enhance appearance, taste, texture and functional needs.

RICHARDSON
MILLING

11:10 a.m. • 27-O

Modification of bran protein solubility and quality by enzyme induced cell wall degradation and microbial fermentation. E. Arte (1), R. Coda (2), C. Rizzello (3), E. Nordlund (4), K. Katina (2), K. KATINA (5). (1) University of Helsinki, Helsinki, Finland; (2) University of Helsinki, Helsinki, Finland; (3) University of Bari, Bari, Italy; (4) VTT Technical Research Centre Finland, Espoo, Finland; (5) Univ of Helsinki, Helsinki, Finland

11:30 a.m. • 28-O

Towards the development of corn flour rich in densely packed matrices and isomaltooligosaccharides (IMOs). M. M. MARTINEZ (1), M. Gomez (1). (1) University of Valladolid, Palencia, Spain

11:50 a.m. • 29-O

Inhibition of intestinal glucosidase by feruloylated arabinoxylan oligosaccharides from corn bran and wheat aleurone. L. MALUNGA (1), P. Eck (1), T. Beta (1). (1) University of Manitoba, Winnipeg, MB, Canada

Emerging Technologies and Applications to Cereals, Grains and Flours: The Next 100 Years... • Symposium • M100AB (CC)

Scientific Initiatives: Quality & Analytical Methods, Chemistry & Interactions, Food Safety & Regulatory

Organizer: Steven Zbylut, Medallion Laboratories/General Mills Inc., Golden Valley, MN, U.S.A.

Moderator: Jack Stevens, General Mills, Golden Valley, MN, U.S.A.

Sponsors: Spectroscopic Methods, Physical Testing Methods

10:30 a.m. • 28-S

Analytical & spectroscopic challenges in the production of gluten-free foods. S. ZBYLUT (1), P. Wehling (1). (1) Medallion Laboratories/General Mills, Minneapolis, MN, U.S.A.

10:50 a.m. • 29-S

Understanding powder flowability of corn flours. J. YIN (1). (1) Freeman Technology, Bayside, NY, U.S.A.

11:10 a.m. • 30-S

I.R. & Raman Imaging of grain based products: What is the future potential of these technologies? S. R. DELWICHE (1). (1) USDA-ARS, Beltsville, MD, U.S.A.

11:30 a.m. • 31-S

Physical testing capabilities and implications—A brief review. T. PETERS (1), S. Zbylut (1). (1) Medallion Laboratories/General Mills Inc., Golden Valley, MN, U.S.A.

11:50 a.m. • 32-S

Analysis of cereal grains by mass spectrometry. J. STEVENS (1), J. Stevens (1). (1) General Mills, Golden Valley, MN, U.S.A.

Enzymes to Improve Cereal Quality • Technical • L100F (CC)

Scientific Initiative: Chemistry & Interactions

Moderators: Lomme Deleu, KU Leuven, Heverlee, Belgium; Les Copeland, University of Sydney, Sydney, NSW, Australia

10:30 a.m. • 30-O

Alsberg-French-Schoch Memorial Lectureship Award - Role of carbohydrate-active enzymes in glycogen and starch metabolism. K. H. PARK (1). (1) Seoul National University, Center for Food and Bioconvergence and Department of Food Science and Biotechnology, Seoul, Korea

11:10 a.m. • 31-O

Surface binding sites (SBS) in starch-metabolising enzymes. B. SVENSSON (1), C. Wilkens (2), D. Cockburn (1), A. Blennow (3). (1) Technical Univ of Denmark, Lyngby, Denmark; (2) Technical University of Denmark, Lyngby, Denmark; (3) University of Copenhagen, Frederiksberg, Denmark

11:30 a.m. • 32-O

Heat treatments reduce *in vitro* protein digestibility of proso millet (*Panicum miliaceum*) flour. P. GULATI (1), D. J. Rose (2). (1) Univ of Nebraska, Lincoln, NE, U.S.A.; (2) University of Nebraska, Lincoln, NE, U.S.A.

11:50 a.m. • 33-O

An innovative enzyme solution for making longer shelf life bread with less or no added sugar. G. FENG (1), G. Feng (1). (1) Corbion, Lenexa, KS, U.S.A.

New Approaches to Gluten-Free Foods • Technical • L100H (CC)
Scientific Initiative: Ingredients & Innovations

Moderators: Cassandra Hillen, North Dakota State University, Fargo, ND, U.S.A.; Katharina Scherf, Deutsche Forschungsanstalt für Lebensmittelchemie, Freising, Germany

10:30 a.m. • 34-O

Evaluation of commercial gluten-free foods from the Brazilian market. B. MATTIONI (1), I. R. dos Santos (1), N. Paulino (2), M. Tilley (3), J. Faubion (4), A. de Francisco (1). (1) Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil; (2) Universidade Bandeirante de São Paulo, São Paulo, Brazil; (3) USDA ARS CGAHR, Manhattan, KS, U.S.A.; (4) Kansas State University, Manhattan, KS, U.S.A.

10:50 a.m. • 35-O

The economic burden of gluten-free products and the potential of dietary inhibitors of transglutaminase-2. K. L. KRAMER (1), J. Losso (1). (1) Louisiana State University: School of Nutrition and Food Sciences, Baton Rouge, LA, U.S.A.

11:10 a.m. • 36-O

Quinoa quality evaluation in the Pacific Northwest. G. WU (1), C. F. Morris (2), K. M. Murphy (1). (1) Washington State University, Pullman, WA, U.S.A.; (2) USDA-ARS, Pullman, WA, U.S.A.

11:30 a.m. • 37-O

Ultra-low gluten barley. C. A. HOWITT (1), G. J. Tanner (2), M. J. Blundell (2), H. Goswami (3), M. L. Colgrave (3). (1) CSIRO - Agriculture Flagship, Canberra, Australia; (2) CSIRO Agriculture Flagship, Canberra, Australia; (3) CSIRO Agriculture Flagship, St. Lucia, Australia

11:50 a.m. • 38-O

Non-linear rheological behavior of gluten free flour doughs and their correlation with bread properties. G. YAZAR (1), O. Duvarci (1), S. Tavman (2), J. L. Kokini (1). (1) Purdue University, West Lafayette, IN, U.S.A.; (2) Ege University, Izmir, Turkey

Sprouted Grains: Paving the Way to Nutritious and Safe Products • Symposium • M100DE (CC)

Scientific Initiatives: Ingredients & Innovations, Food Safety & Regulatory, Health & Nutrition

Organizers: Elsayed Abdelaal, Agriculture and Agri-Food Canada, Guelph, ON, Canada; Roberto Serrano, Grain Millers, Eugene, OR, U.S.A.; Liyi Yang, Kellogg Company, Battle Creek, MI, U.S.A.; Boris Nemzer, FutureCeuticals, Momence, IL, U.S.A.; Andrea Bianchini, University of Nebraska, Lincoln, NE, U.S.A.

Moderators: Elsayed Abdelaal, Agriculture and Agri-Food Canada, Guelph, ON, Canada; Roberto Serrano, Grain Millers, Eugene, OR, U.S.A.

Sponsors: Bioactive Compounds Technical Committee, Food Safety and Microbiology Technical Committee

10:30 a.m. • 33-S

Sprouted seeds as natural fortification/enrichment ingredients: Nutrient bioavailability, antioxidant activity and phytochemical/anti-nutrient profiles. M. OMARY (1). (1) California State University, Los Angeles, CA, U.S.A.

34-S WITHDRAWN

10:50 a.m. • 35-S

Germinated grains processing considerations and product development. J. Ding (1), H. FENG (2), S. Xiong (3), S. Zhao (3). (1) Huazhong Agricultural University and University of Illinois, Wuhan, China; (2) University of Illinois at Urbana-Champaign, Urbana, IL, U.S.A.; (3) Huazhong Agricultural University, Wuhan, China

11:10 a.m. • 36-S

Sprouting and malting for specialty food ingredients. R. HANSEN (1). (1) Briess Malt & Ingredients Co., Chilton, WI, U.S.A.

11:30 a.m. • 37-S

Sprouted grains: Is the milling industry taking a chance? A. BIANCHINI (1). (1) University of Nebraska, Lincoln, NE, U.S.A.

11:50 a.m.

Discussion

Our Science, Our Future

Hamed Faridi, 1995 AACCI President

“The future of our industry and AACCI is very bright and exciting. Global mega trends such as changes in demographics, loss of agricultural lands, global warming, and explosion of flavor and culinary trends will create greater demand for science-based solutions for consumers. AACCI is a science-based professional association and will play a greater role in the advancement of the cereal and grain industries for decades to come.”

NOW ON SALE in the AACCI PRESS Bookstore!

Understand the science and technology behind the ‘world’s new bread’—now the fastest growing segment of the baking industry



CENTENNIAL SPECIAL:



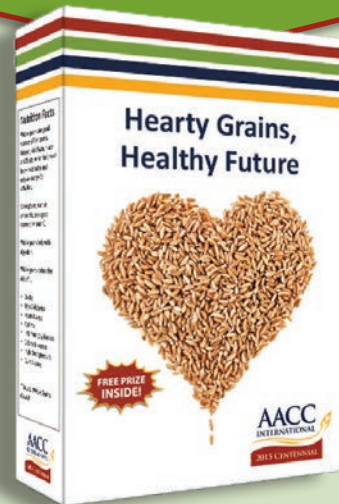
Save on all titles.

Buy any 3, and get your choice of Ingredient Handbook **FREE**, a **\$79 value!**



First 100 bookstore visitors:

Make any purchase, and get a commemorative **100th Anniversary cereal box** filled with surprise gifts!



TREE TOP

Grower Owned Since 1960

Every fruit under the sun.™

At Tree Top Fruit Ingredients, we're more than just apples. In fact, we offer more types of fruit in more forms than any other supplier on earth. So the next time you need an innovative fruit solution give our R&D experts a call at **800.367.6571 ext. 1435** or visit us online at www.treetoppingredients.com

© 2014 Tree Top Inc.



More fruits, more forms, more possibilities.™

Juice Concentrates • Fresh & Frozen Fruits • Dried Fruits • Infused Fruits • Fruit Purées • Fruit Preps • Formulated Fruit Solutions

TUESDAY AFTERNOON SCIENTIFIC SESSIONS

(listed in alphabetical order by title)

Session number (1-S) and technical number (1-O) refer to the Author Index in the Program Book.

Find complete details on the meeting website at aacnet.org/meetings/annual/ScientificProgram/Pages/ScientificSessions (CC) refers to Convention Center.

Establishing Dietary Reference Intakes for Bioactives: Cereal Grains Focus • Science Café • M100AB (CC)

Scientific Initiatives: Food Safety & Regulatory, Health & Nutrition
Organizers: Jodee Johnson and YiFang Chu, PepsiCo, Barrington, IL, U.S.A.

Moderator: Taylor Wallace, George Mason University, Fairfax, VA, U.S.A.

Sponsor: Bioactive Compounds Methods Technical Committee

Financial Sponsor: National Osteoporosis Foundation

38-S Dietary reference intakes in the United States. T. C. WALLACE (1). (1) George Mason University, Fairfax, VA, U.S.A.

39-S The evolving path towards dietary guidance for bioactives. J. W. ERDMAN (1). (1) Department of Food Science and Human Nutrition, University of Illinois, Urbana, IL, U.S.A.

40-S Oat bioactives: Types, mechanisms, and functions. J. B. BLUMBERG (1). (1) Tufts University, Boston, MA, U.S.A.

FSMA in Action • Hot Topic • L100F (CC)

(2:00 – 4:15 p.m.)

Organizer: Barbara B. Heidolph, Innophos, Inc., Cranbury Township, NJ, U.S.A.

Moderator: Barbara B. Heidolph, Innophos, Inc., Cranbury Township, NJ, U.S.A.

- FSMA-What does it mean? R. J. GONZALEZ (1). (1) The Acheson Group (TAG), UT, U.S.A.
- Traceability: Implications for BRC Certified Millers. C. HURBURGH (1). (1) Iowa State University, Ames, IA, U.S.A.
- Measurement uncertainty/specification limitations. T. NELSEN (1). (1) Retired, Port Byron, IL U.S.A.
- ISO 22000 Guidance Document overview – A web-based tool from AACCI. J. ROBINSON (1). (1) Bay State Milling, Minneapolis, MN, U.S.A.
- How to get involved. B. B. HEIDOLPH (1). (1) Innophos, Inc., Cranbury Township, NJ, U.S.A.

A New Vision for Grain Science – Grain Science for 2025 • Hot Topic • M100DE (CC)

Organizers: Dr. Charles R. Hurburgh, Jr. and Dirk Maier, Iowa State University, Ames, IA, U.S.A.

Please check addendum for presentation and speaker information.

Nutrition for the Future: Filling the Protein Gaps from Cereal and Legume Proteins • Symposium • M100FG (CC)

Scientific Initiatives: Biotechnology & Sustainability, Health & Nutrition

Organizers: Monjur Hossen, Kellogg, Battle Creek, MI, U.S.A.; Katharina Scherf, Deutsche Forschungsanstalt für Lebensmittelchemie, Freising, Germany; Bram Pareyt, Puratos NV, Groot-Bijgaarden, Belgium

Moderators: Monjur Hossen, Kellogg, Battle Creek, MI, U.S.A.; Janice Rueda, ADM Edible Bean Specialties, Inc., Decatur, IL, U.S.A.

Sponsors: Protein Division, Nutrition Division

2:00 p.m. • 41-S

In vivo and in vitro estimates of the quality of protein in pulse: Cereal blends. J. D. HOUSE (1). (1) Department of Human Nutritional Sciences, University of Manitoba, Winnipeg, MB, Canada

2:20 p.m. • 42-S

Future in food formulations: Why and how to balance cereal and pulse proteins in food applications? H. MASKUS (1), L. Bourre (1). (1) Canadian International Grains Institute, Winnipeg, MB, Canada

2:40 p.m. • 43-S

Moving beans off the picnic plate and into the mainstream: Lessons from school food. J. RUEDA (1). (1) ADM Edible Bean Specialties, Inc., Decatur, IL, U.S.A.

3:00 p.m. • 44-S

Health benefits of pulse proteins and pulse-cereal blends. J. M. CURRAN (1). (1) Pulse Canada, Winnipeg, MB, Canada

3:20 p.m. • 45-S

Lactic fermentation as a tool for improving the nutritional quality of cereal and legume proteins. C. G. RIZZELLO (1). (1) University of Bari Aldo Moro, Bari, Italy

Reflecting on the Past Century and the Role of Asian Market & Products—Where to from Now! • Symposium • L100D (CC)

Scientific Initiatives: Biotechnology & Sustainability, Engineering & Processing, Health & Nutrition, Quality & Analytical Methods

Organizers: Larisa Cato, Australian Export Grains Innovation Centre, South Perth, Australia; Gary Hou, Wheat Marketing Center, Portland, OR, U.S.A.; Jinsong Bao, Zhejiang University, Hangzhou, China

Moderators: Larisa Cato, Australian Export Grains Innovation Centre, South Perth, Australia; Gary Hou, Wheat Marketing Center, Portland, OR, U.S.A.

Sponsors: Asian Products Technical Committee, Rice Milling and Quality Technical Committee

2:00 p.m. • 77-S

Quality research into Asian cereal-based foods—A historical perspective. L. CATO (1), G. B. Crosbie (2). (1) Australian Export Grains Innovation Centre, South Perth WA, Australia; (2) Crosbie Grain Quality Consulting, East Fremantle, WA, Australia

2:20 p.m. • 78-S

Importance of health & nutrition in the Asian context: How to cope with the new challenges? G. G. HOU (1). (1) Wheat Marketing Center, Portland, OR, U.S.A.

2:40 p.m. • 79-S

Gluten-free noodle technology of making, evaluation techniques—New technology and developments. M. Y. SU (1). (1) China Grain Products R&D Institute, Taipei, Taiwan

3:00 p.m. • 80-S

Cereal research, industry, and products in Japan: Past and future perspective. H. OKUSU (1). (1) Nippon Flour Mills, Kanagawa, Japan

3:20 p.m.

Discussion

Best Student Research Paper Competition • L100H (CC)

Organizer: Professional Development Panel, Sean Finnie, PDP Chair, Bay State Milling, Minneapolis, MN, USA

Moderators: Sean Finnie, Bay State Milling, Minneapolis, MN, U.S.A.; John Mathew, Frito Lay, Inc., Plano, TX, U.S.A.

Financial Sponsors: B.C. Williams Food Products, Cain Food Industries, Inc., Cargill, Corbion, Frito-Lay Inc., General Mills, The Mennel Milling Co., The Mitsubishi International Food Ingredients, Mother Murphy's Flavors, Starquest F.O.O.D. Consulting LLC, TIC Gums Inc.

2:00 p.m. • 46-S

Interaction of proanthocyanidins with partially gelatinized normal and waxy maize starch and impact on in-vitro starch digestibility. D. B. AMOAKO (1), J. M. Awika (1). (1) Texas A&M University, College Station, TX, U.S.A.

2:25 p.m. • 47-S

Starch and protein digestibility of novel extruded binary blend foods. M. JOSEPH (1), L. Zhu (1), Q. Guo (1), B. Lindshield (2), S. Alavi (1). (1) Department of Grain Science and Industry, Kansas State University, Manhattan, KS, U.S.A.; (2) Department of Human Nutrition, Kansas State University, Manhattan, KS, U.S.A.

2:50 p.m. • 48-S

Influence of vacuum mixing on textural properties and protein structure of noodle dough. R. LIU (1), Y. Q. Zhang (1), L. Wu (1), B. Zhang (1), Y. M. Wei (1). (1) Chinese Academy of Agricultural Sciences/Key Laboratory of Agro-Products Processing, Ministry of Agriculture, Beijing, China

3:15 p.m. • 49-S

Spring wheat gliadins: Have they changed in 100 years? M. MALALGODA (1), J. B. Ohm (2), S. Meinhardt (3), S. Simsek (1). (1) North Dakota State University, Department of Plant Sciences, Cereal Science Graduate Program, Fargo, ND, U.S.A.; (2) USDA-ARS Hard Red Spring and Durum Wheat Quality Laboratory, North Dakota State University, Fargo, ND, U.S.A.; (3) North Dakota State University, Department of Plant Pathology, Fargo, ND, U.S.A.

3:40 p.m. • 50-S

Formation and amylase resistance of a novel nano-particulate fraction obtained by acid hydrolysis of normal, hylon V and VII maize starches. M. PEREZ HERRERA (1), T. Vasanthan (1), R. Hoover (2), M. Izdorczyk (3). (1) University of Alberta, Edmonton, AB, Canada; (2) Memorial University of Newfoundland, St. John's, NF, Canada; (3) Canadian Grain Commission, Grain Research Laboratory, Winnipeg, MB, Canada

4:05 p.m. • 51-S

Time-temperature distribution studies during preconditioning of extruded pet food. T. ZHOU (1), S. Alavi (2), C. Stark (1). (1) Food Science Institute, Kansas State University, Manhattan, KS, U.S.A.; (2) Department of Grain Science and Industry, Kansas State University, Manhattan, KS, U.S.A.



Emulsifiers and know-how in bakery put to work

Palsgaard invented and patented the activated cake emulsifier over 40 years ago and we haven't stopped developing since.

Not only do we continuously develop these unique, powdered ingredients, which are lean label, fast reacting and highly tolerant, we also help cake and cake mix producers around the world test and develop new recipes, based on our emulsifiers for:

- Bakers' mixes
- Retail mixes
- Industrial cakes



Visit www.palsgaard.com to learn more about how we can help you in your product development.

DAILY MEETING SCHEDULE AND SESSIONS

Meetings take place at the Minneapolis Convention Center (CC) unless otherwise noted.

WEDNESDAY, OCTOBER 21

7:00 – 8:15 a.m.	Kansas State University Breakfast*	L100BC (CC)
7:00 – 8:30 a.m.	Approved Methods Technical Committee Meetings	
	<ul style="list-style-type: none"> • Asian Products • Bioactive Compounds Methods • Chemical Leavening Agents • Physical Testing Methods • Pulse and Legume • Spectroscopic Methods 	Duluth, Hilton Duluth, Hilton Directors Row 1, Hilton Directors Row 2, Hilton Directors Row 4, Hilton Directors Row 3, Hilton
7:00 – 8:30 a.m.	Scientific Advisory Panel	Rochester Room, Hilton
7:00 a.m. – 12:00 p.m.	Speaker Ready Room Open	M101B (CC)
7:30 – 8:30 a.m.	North Dakota State University Alumni Breakfast*†	<i>Offsite – The News Room Restaurant, 990 Nicollet Mall</i>
7:30 a.m. – 2:30 p.m.	Registration Open	Mezzanine Lobby (CC)
8:30 – 10:00 a.m.	Coffee, Exhibits, and Centennial Lane Open with Poster Viewing	Hall A (CC)
9:00 – 10:00 a.m.	2016 Technical Program Planning Meeting	L100E (CC)
10:00 – 11:00 a.m.	Nominating Committee Meeting	M101A (CC)
10:00 a.m. – 3:00 p.m.	AACCI PRESS Bookstore	Lower Level Lobby (CC)
10:20 a.m. – 12:00 p.m.	Scientific Sessions	
	<ul style="list-style-type: none"> • Agents of Change and Dealing with the Unknowns of the Future – <i>Symposium</i> • Functionality of Cereal Components – <i>Technical</i> • Grain Components and Gastrointestinal Health – <i>Technical</i> • New Methods in Analysis of Grain Components – <i>Technical</i> • Non-Food Uses of Grains – <i>Technical</i> • Pulse Ingredients in Cereal Food Processing – <i>Symposium</i> 	M100AB (CC) M100FG (CC) L100D (CC) L100F (CC) L100H (CC) M100DE (CC) Hall A (CC)
10:30 a.m. – 12:30 p.m.	Exhibit and Poster Take-Down	
12:00 – 1:30 p.m.	Lunch Break	
12:00 – 1:30 p.m.	Engineering & Processing Division Meeting and Lunch*	M100I (CC)
12:00 – 1:30 p.m.	ICC Luncheon*	M100H (CC)
12:00 – 1:30 p.m.	Milling & Baking Division Meeting and Networking Lunch*	L100BC (CC)
12:00 – 1:30 p.m.	Nutrition Division Meeting and Lunch*	M100J (CC)
12:00 – 1:30 p.m.	Rheology Division Meeting and Lunch*	L100I (CC)
12:00 – 1:30 p.m.	Rice Division Lunch*	L100G (CC)
12:30 – 3:30 p.m.	Approved Methods Technical Committee Chairs Meeting and Lunch	Rochester Room, Hilton
1:30 – 3:45 p.m.	Science On the Move Session: Extrusion and Value-Added Grain Processing*† (<i>preregistration required – bus departs Convention Center front entrance 1:30 p.m.</i>)	<i>Offsite – Buhler</i>
1:45 – 3:30 p.m.	Scientific Sessions	
	<ul style="list-style-type: none"> • Federal Nutrition Policy: What's New and What's Next? – <i>Hot Topic</i> • Gluten in Cereal-Based Foods—Benefits and Risks – <i>Science Café</i> • Innovating with the Climate-Friendly Ancient Grains – <i>Symposium</i> • Refined, Processed, Fortified, and Gluten-Containing Grain-Based Foods: Bane or Boon – <i>Deep Dive</i> • Rice Constituents, Structure, and Effects of Processing – <i>Symposium</i> • Wheat – A Nutritious Grain Over a Century of Plant Breeding – <i>Hot Topic</i> 	M100FG (CC) M100AB (CC) L100F (CC) L100D (CC)
4:00 – 5:30 p.m.	Closing Session, Awards, and Keynote Speaker Valeri Lantz-Gefroh	L100H (CC) M100DE (CC) Grand Ballroom A-D, HILTON

*ticket required

†offsite location – walking distance unless otherwise noted

WEDNESDAY DAILY HIGHLIGHTS

NEW! Coffee and Exhibits with Poster Viewing

8:30 – 10:00 a.m.

Grab a complimentary cup of coffee and take this last opportunity to visit with exhibitors, view the scientific posters, and take some time to experience the activities in the Centennial Lane.

Division Meetings and Lunches

12:00 – 1:30 p.m.

Meet with colleagues over lunch and learn more about the business of your specific division. Open to anyone interested in attending. *Preregistration is required.*

Closing Session, Awards, and Keynote Speaker Valeri Lantz-Gefroh, Alan Alda's Center for Communicating Science

(Note: This session is held at the HILTON HOTEL)

4:00 – 5:30 p.m.

Look to the future in our Closing Session and celebrate the next 100 years of our science and association. Join in welcoming the next century of leaders as we introduce the new board members and recognize the recipients of the Edith A. Christensen Award for Outstanding Contributions in Analytical Methodology and the Texture Technologies Quality Research Awards for best presentation and best paper. Recognize the winners who excelled in their research and presentation skills in the Best Student Paper Competition.

Learn how to effectively share your passion for cereal grain science with others as keynote speaker **Valeri Lantz-Gefroh presents “Distilling Your Message – Communicating Your Science.”**

Valeri Lantz-Gefroh, MFA, Improvisation Coordinator, Alan Alda Center for Communicating Science, Stony Brook University



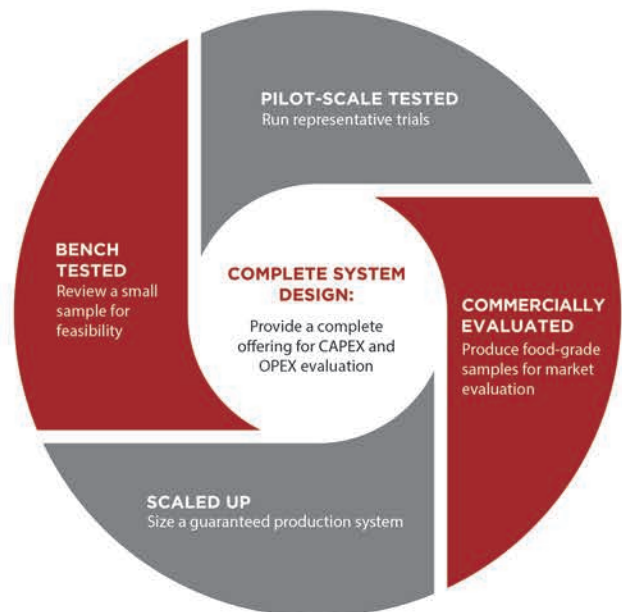
Valeri Lantz-Gefroh, teaches workshops and graduate courses at Stony Brook and has traveled around the country teaching improvisation at other universities, conferences, and labs. She is the producer of Science on Tap, an award-winning live event and web show. She is also the coordinator of Science Unplugged, where she mentors and coaches students from the Alda Center to give science talks for the public. Lantz-Gefroh is spearheading a project to train teaching assistants in biology, physics, and chemistry to better communicate with their students and is the lead instructor for this initiative. Lantz-Gefroh has been a theater professional for the past 25 years as an actor, director and playwright.



ENHANCE YOUR INGREDIENT

Bepex International's Heat Treatment technology pasteurizes, deactivates enzymes and/or modifies performance. Our flexible process systems are designed to fit unique material needs and we work with our customers to ensure success at every stage.

Learn more by visiting us at booth #417



Bepex International LLC
Minneapolis, MN USA
612.331.4370 | Bepex.com

INTEGRITY • COMMITMENT • INNOVATION

WEDNESDAY MORNING SCIENTIFIC SESSIONS

(listed in alphabetical order by title)

Session number (1-S) and technical number (1-O) refer to the Author Index in the Program Book.

Find complete details on the meeting website at aacnet.org/meetings/annual/ScientificProgram/Pages/ScientificSessions

(CC) refers to Convention Center.

Agents of Change and Dealing with the Unknowns of the Future • Symposium • M100AB (CC)

Scientific Initiatives: Ingredients & Innovations, Engineering & Processing

Organizer: Arthur Bettge, ADB Wheat Consulting, Moscow, ID, U.S.A.

Moderator: Barbara Heidolph, Innophos, Cranbury, NJ, U.S.A.

Sponsors: Milling and Baking Division, Soft Wheat and Flour Products Technical Committee, Chemical Leavening Technical Committee

10:20 a.m. • 52-S

Chemical leavening agents: How to address functionality issues when mineral reduction is required for health and food safety. B. B. HEIDOLPH (1). (1) Innophos, Inc., Cranbury, NJ, U.S.A.

10:40 a.m. • 53-S

Milling whole grain flours: Challenges surrounding production of a functional ingredient. G. L. WEAVER (1). (1) Ardent Mills, Omaha, NE, U.S.A.

11:00 a.m. • 54-S

Whole grain flours: Coping with bran-associated compounds and their impact on storage and utilization. M. BUNZEL (1). (1) Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

11:20 a.m. • 55-S

How to replace chlorination of flour: New, and not-so-new, approaches to modifying functionality. C. J. LIN (1). (1) The Mennel Milling Co., Fostoria, OH, U.S.A.

11:40 a.m. • 56-S

Modifying flour performance by exploiting the potential of enzymes and non-starch carbohydrates. C. M. COURTIN (1). (1) KU Leuven, Leuven, Belgium

Functionality of Cereal Components • Technical • M100FG (CC)

Scientific Initiative: Engineering & Processing

Moderators: Peter Koehler, Deutsche Forschungsanstalt für Lebensmittelchemie, Freising, Germany; Ming-Hsu Chen, University of Illinois at Urbana-Champaign, Urbana, IL, U.S.A.

10:20 a.m. • 39-O

Walter Bushuk Graduate Research Award in Cereal Protein Chemistry - Cross-linking of gluten, globular proteins and mixtures thereof in aqueous ethanol and water. M. A. LAMBRECHT (1), I. Rombouts (1), J. A. Delcour (1). (1) KU Leuven, Leuven, Belgium

10:40 a.m. • 40-O

The influence of size, shape and hydrophobicity of starch for Pickering emulsion stabilization. H. SAARI (1), M. Sjöö (1), M. Rayner (1), M. Wahlgren (1). (1) Lund University, Lund, Sweden

11:00 a.m. • 41-O

Rheological stability of waxy wheat flour and its potential as a unique freeze-thaw stable ingredient. R. KOWALSKI (1), A. Meldrum (2), S. Wang (1), S. Constantinescu (2), H. Joyner (2), C. Morris (3), G. Ganjyal (1). (1) Washington State University,

Pullman, WA, U.S.A.; (2) University of Idaho, Moscow, ID, U.S.A.; (3) USDA, Pullman, WA, U.S.A.

11:20 a.m. • 42-O

Monitoring protein network formation during pound cake making using ¹⁵N-labeled egg protein. L. J. DELEU (1), E. Wilderjans (1), I. Van Haesendonck (2), K. Brijs (1), J. A. Delcour (1). (1) KU Leuven, Leuven, Belgium; (2) Puratos, Groot-Bijgaarden, Belgium

11:40 a.m. • 43-O

Novel wheat flour imparting a reduction in bread staling. P. VRINTEN (1), T. Inokuma (2), T. Shimbata (2), T. Nakamura (3). (1) Bioriginal Food and Science Corporation, Saskatoon, SK, Canada; (2) Central Laboratory, Nippon Flour Mills Co., Ltd., Atsugi, Japan; (3) Tohoku National Agriculture Research Center, Morioka, Japan

Grain Components and Gastrointestinal Health • Technical • L100D (CC)

Scientific Initiative: Health & Nutrition

Moderators: Erin Bowers, Iowa State University, Ames, IA, U.S.A.; Mariana Perez Herrera, University of Alberta, Edmonton, AB, Canada

10:20 a.m. • 44-O

Young Scientist Research Award - Soluble grain fibres: Finding the optimal balance between nutritional and technological functionality. L. NYSTRÖM (1). (1) ETH Zurich. Institute of Food, Nutrition and Health, Zurich, Switzerland

11:00 a.m. • 45-O

Dietary fibre polysaccharides in the digestive tract: Physical properties and health implications. M. GIDLEY (1). (1) Univ of Queensland, St Lucia, Brisbane, Australia

11:20 a.m. • 46-O

Gastric emptying rate of brown rice may be controlled by factors other than slower physical degradation in the stomach. E. A. PLETSCHE (1), B. R. Hamaker (1). (1) Whistler Center for Carbohydrate Research and Department of Food Science, Purdue University, West Lafayette, IN, U.S.A.

11:40 a.m. • 47-O

Conversion of 8-5-coupled dehydrodiferulates by human intestinal microbiota. R. SCHENDEL (1), C. Karrer (1), A. Hildebrand (1), D. Bunzel (2), M. Huch (2), S. Kulling (2), M. Bunzel (1). (1) Karlsruhe Institute of Technology, Department of Food Chemistry and Phytochemistry, Karlsruhe, Germany; (2) Federal Research Institute of Nutrition and Food, Max Rubner Institute (MRI), Karlsruhe, Germany

New Methods in Analysis of Grain Components • Technical • L100F (CC)

Scientific Initiative: Quality & Analytical Methods

Moderators: Ravindra N. Chibbar, University of Saskatchewan, Saskatoon, SK, Canada; Oguz Acar, Central Research Institute for Field Crops, Ankara, Turkey

10:20 a.m. • 48-O

Edith Christensen Award for Outstanding Contributions in Analytical Methods - Development of new methods to assess the nutritional aspects of cereal grain products. N. AMES (1). (1) Agriculture and Agri-Food Canada (AAFC), Winnipeg, MB, Canada

11:00 a.m. • 49-O

Effects of a proline endopeptidase on the detection and quantification of gluten during the fermentation of beer. R. PANDA (1), K. L. Fiedler (1), C. Y. Cho (1), W. L. Stutts (1), R. Cheng (1), E. A. Garber (1). (1) Food and Drug Administration, College Park, MD, U.S.A.

11:20 a.m. • 50-O

Volatile compounds characterization of aged rice using colorimetric sensor array. H. LIN (1), H. Jin (1), B. Guan (1). (1) Jiangsu university, Zhenjiang, China

11:40 a.m. • 51-O

Updating AACC Method 32-45.01 for the measurement of total dietary fiber. B. V. MCCLEARY (1), A. Draga (1), N. Sloane (1). (1) Megazyme International Ireland Ltd., Bray, County Wicklow, Ireland

Non-Food Uses of Grains • Technical • L100H (CC)

Scientific Initiative: Biotechnology & Sustainability

Moderators: Lei Fang, Iowa State University, Ames, IA, U.S.A.; Nesrin Hesso, ONIRIS, Nantes, France

10:20 a.m. • 52-O

Preparation and characterization of Starch/PVOH/Laponite RD films for biodegradable food packaging. A. Thatte (1), P. H. MANEPALLI (2), S. Thomas (3), S. Alavi (2). (1) Indian Institute of Technology Kharagpur, Kharagpur, India; (2) Kansas State University, Manhattan, KS, U.S.A.; (3) Mahatma Gandhi University, Kottayam, India

10:40 a.m. • 53-O

A bio-plastic application for kafirin, the sorghum prolamin protein, but what is needed to enable its commercialization? J. TAYLOR (1). (1) Univ of Pretoria, Pretoria Gauteng, South Africa

11:00 a.m. • 54-O

Developing soy protein isolate-based biopolymers with enzyme in food packaging. E. MOHAMMAD ZADEH (1). (1) Virginia Tech, Blacksburg, VA, U.S.A.

11:20 a.m. • 55-O

Evaluation of partial germ supplementation to improve dry fractionation ethanol fermentation. D. RAMCHANDRAN (1), P. Wang (2), B. Dien (3), W. Liu (1), M. A. Cotta (3), V. Singh (1). (1) University of Illinois, Urbana Champaign, Urbana, IL, U.S.A.; (2) National Energy Technology Laboratory, US Department of Energy, Pittsburgh, PA, U.S.A.; (3) National Center of Agricultural Utilization Research, USDA, Peoria, IL, U.S.A.

11:40 a.m. • 56-O

Comparison of fermentation characteristics between colored corn and yellow dent corn in two dry grind process methods. Z. WANG (1), H. Huang (1), E. de Mejia (1), Q. Li (1), V. Singh (1). (1) University of Illinois at Urbana-Champaign, Champaign, IL, U.S.A.

Pulse Ingredients in Cereal Food Processing • Symposium • M100DE (CC)

Scientific Initiatives: Ingredients & Innovations, Chemistry & Interactions, Engineering & Processing, Health & Nutrition

Organizers/ Moderators: Wajira Ratnayake and Nagul Naguleswaran, Ingredient, Inc., Bridgewater, NJ, U.S.A.

Sponsors: Pulse and Legume Committee, Program Committee
Financial Sponsor: Ingredion Inc.

10:20 a.m. • 57-S

Use of pulse ingredients in food applications. D. UZUNALIOGLU (1), C. Gunnett (1), J. Du (1), C. Sistrunk (1), J. Maliska (1), M. Tulbek (2), E. Yildiz (1). (1) Ingredion Inc., Bridgewater, NJ, U.S.A.; (2) AGT Foods and Ingredients, Saskatoon, SK, Canada

10:40 a.m. • 58-S

Pulse protein structure-functional properties and food applications. L. CHEN (1). (1) University of Alberta, Edmonton, AB, Canada

11:00 a.m. • 59-S

Pulse carbohydrates: Properties and applications. N. NAGULESWARAN (1). (1) Ingredion Inc., Bridgewater, NJ, U.S.A.

11:20 a.m. • 60-S

Flavor and anti-nutrients in pulses: Challenges in recent advances in food applications. M. C. TULBEK (1). (1) AGT Food and Ingredients Inc., Saskatoon, SK, Canada

11:40 a.m. • 61-S

Extrusion processing of pulse ingredients. C. Li (1), G. GANJYAL (1). (1) Washington State University, Pullman, WA, U.S.A.

SUPPORT THE NEXT 100

Visit the AACCI Foundation in the Exhibit Hall to support our members and the future of cereal grain science. Make a donation, learn about the new Foundation efforts, visit with the 2015 student travel awardees, and meet the "AACCI Giants."



Make a donation (minimum \$20) and receive this gift.

AACC
INTERNATIONAL

FOUNDATION
Supporting the Next 100

WEDNESDAY AFTERNOON SCIENTIFIC SESSIONS

(listed in alphabetical order by title)

Session number (1-S) and technical number (1-O) refer to the Author Index in the program book.

Find complete details on the meeting website at aacnet.org/meetings/annual/ScientificProgram/Pages/ScientificSessions

(CC) refers to **Convention Center**.

Federal Nutrition Policy: What's New and What's Next? •

Hot Topic • M100FG (CC)

Organizer: Janice Rueda, Ph.D., Archer Daniels Midland, Decatur, IL U.S.A.

Co-Organizer: John Finley, Ph.D., USDA-ARS

Moderator: John Finley, Ph.D., USDA-ARS

Sponsoring Committee: Nutrition Committee

Panel Participants:

- M. SMITH EDGE, Senior Advisor Science and Consumer Insights, International Food Information Council
- J. L. SLAVIN, Professor, Department of Food Science and Nutrition, University of Minnesota
- K. WIEMER, Senior Fellow, General Mills Bell Institute of Health & Nutrition

Gluten in Cereal-Based Foods—Benefits and Risks •

Science Café • M100AB (CC)

Scientific Initiatives: Chemistry & Interactions, Food Safety & Regulatory, Health & Nutrition, Quality & Analytical Methods

Organizer: Peter Koehler, Deutsche Forschungsanstalt für Lebensmittelchemie, Freising, Germany

Moderators: Peter Koehler, Deutsche Forschungsanstalt für Lebensmittelchemie, Freising, Germany; Bram Pareyt, Puratos NV, Groot-Bijgaarden, Belgium

Sponsors: Protein & Enzymes Technical Committee, Protein Division

- 62-S** Gluten in cereal-based foods—benefits and risks. P. KOEHLER (1). (1) Deutsche Forschungsanstalt fuer Lebensmittelchemie, Freising, Germany
- 63-S** Gluten—related disorders. K. SCHERF (1). (1) Deutsche Forschungsanstalt fuer Lebensmittelchemie, Freising, Germany
- 64-S** Improved reference materials for gluten-free analysis. R. POMS (1), S. Tömösközi (2), T. Koerner (3), P. Koehler (4). (1) MoniQA—International Association for Monitoring and Quality Assurance in the Total Food Supply Chain, Vienna, Austria; (2) Budapest University of Economics, Budapest, Hungary; (3) Health Canada, Ottawa, ON, Canada; (4) Deutsche Forschungsanstalt für Lebensmittelchemie, Leibniz Institut, Freising, Germany
- 65-S** Gluten method measurement variation. P. WEHLING (1). (1) General Mills, Inc., Minneapolis, MN, U.S.A.
- 66-S** The challenges and possible solutions in determining the gluten concentration in complex food matrices. T. GRACE (1). (1) Bia Diagnostics and Elution Technologies, Colchester, VT, U.S.A.

Innovating with the Climate-Friendly Ancient Grains •

Symposium • L100F (CC)

Scientific Initiative: Biotechnology & Sustainability, Health & Nutrition, Ingredients & Innovations

Organizer: John Taylor, University of Pretoria, South Africa; Joseph Awika, Texas A&M University, College Station, TX, U.S.A.

Moderators: Timothy Dalton, Kansas State University, Manhattan, KS, U.S.A.; John Taylor, University of Pretoria, Pretoria, South Africa

Sponsor: The USAID Feed The Future supported Sorghum and Millet Innovation Lab

1:45 p.m. • 67-S

Ancient grains: Do they really have better nutritional quality and health promoting properties than the Big 4 cereals? J. M. AWIKA (1). (1) Texas A&M University, College Station, TX, U.S.A.

2:05 p.m. • 68-S

Can ancient grains really feed the world: Developed and developing world perspectives? J. TAYLOR (1). (1) University of Pretoria, Pretoria, South Africa

2:25 p.m. • 69-S

Prospects for genetic improvement of ancient grains. D. B. HAYS (1), J. Awika (1), W. Rooney (1), J. Taylor (2). (1) Texas A&M University, College Station, TX, U.S.A.; (2) University of Pretoria, Pretoria, South Africa

2:45 p.m. • 70-S

Pseudocereals—Can they become mainstream staple foods? R. SCHOENLECHNER (1), S. Tömösközi (2). (1) BOKU - University of Natural Resources and Life Sciences, Vienna, Austria; (2) Faculty of Chemical Technology and Biotechnology, Budapest University of Technology and Economics, Budapest, Hungary

3:05 p.m. • 71-S

Underutilized climate-friendly African legumes: Food, nutritional, and health-promoting aspects. G. DUODU (1), A. Minnaar (2). (1) University of Pretoria, Department of Food Science, Pretoria, South Africa; (2) Department of Food Science, University of Pretoria, Pretoria, South Africa

Refined, Processed, Fortified, and Gluten-containing

Grain-based Foods: Bane or Boon • Deep Dive • L100D (CC)

Organizers/Moderators: Julie M. Jones, Professor Emerita, St. Catherine University, St. Paul, MN, U.S.A.; Peter Weegels, Director European Bakery Innovation Centre, The Netherlands

Panel Participants:

- J. M. Jones, Professor Emerita, St. Catherine University, St. Paul, MN, U.S.A.;
- P. L. Weegels, Director, European Bakery Innovation Centre, Papendrecht, Netherlands

Rice Constituents, Structure, and Effects of Processing •

Symposium • L100H (CC)

*Scientific Initiatives: Biotechnology & Sustainability, Chemistry & Interactions***Organizers/Moderators:** Jinsong Bao, Zhejiang University, Hangzhou, China; Delilah F. Wood, USDA ARS, Albany, CA, U.S.A.**Sponsors:** Rice Division and Protein Division, Asian Products Technical Committee**1:45 p.m. • 72-S**

“Cabling technology” for advanced grain management—perspectives on rice quality and mycotoxins. G. G. ATUNGULU (1), G. G. Atunguu (1). (1) University of Arkansas Division of Agriculture, Fayetteville, AR, U.S.A.

2:05 p.m. • 73-S

Crosstalks between biopolymers in rice: Are we listening to all the voices? F. BONOMI (1), A. Barbiroli (1), S. Iametti (1), M. Marengo (1), A. Marti (1), M. A. Pagani (1). (1) University of Milan, Milan, Italy

2:25 p.m. • 74-S

Understanding red rices—difference and similarities. J. MANFUL (1), C. C. Grimm (2), J. Gayin (3). (1) Africa Rice Center, Cotonou, Benin; (2) USDA-SRRC, New Orleans, LA, U.S.A.; (3) University of Guelph, Department of Food Science, Guelph, ON, Canada

2:45 p.m. • 75-S

Identification of phenolic acids and anthocyanins in whole grain rice and their relations to antioxidant capacity. J. S. BAO (1), Y. F. Shao (1), H. C. Zhang (2), T. Beta (2). (1) Zhejiang University, Hangzhou, China; (2) University of Manitoba, Winnipeg, MB, Canada

3:05 p.m. • 76-S

Rice microstructure. D. F. WOOD (1), T. G. Williams (1), W. J. Orts (1). (1) USDA ARS WRRR, Albany, CA, U.S.A.

Wheat – A Nutritious Grain Over A Century of Plant Breeding • Hot Topic • M100DE (CC)**Moderator and Organizer:** Ravindra Chibbar, University of Saskatchewan, Saskatoon, SK, Canada

- Genetic gains in agronomic and selected end-use quality traits over a century of genetic improvement of Canada Western Red Spring Wheat. P. HUCL, Crop Development Centre, University of Saskatchewan, Saskatoon, SK, Canada
- Grain mineral composition, and starch concentration, composition and structure in Canada hard red spring wheat over a century of wheat improvement. S. JAISWAL, Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, Canada
- Grain protein concentration and composition in Canada hard red spring wheat over a century of wheat improvement. U. KANNAN, Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, Canada

Alveo^{lab}_{graph}

The new original Alveograph

by CHOPIN Technologies

The Alveograph is **internationally recognized and standardized**. It is used daily by wheat breeding, grain storage, milling and baking industries to measure the viscoelastic properties of wheat flours.

The new AlveoLab is **more accurate and easier** to run. Key steps of the test are now fully **automated** to limit the impact of the operator. Moreover, dough bubbles are made in a fully **temperature and humidity controlled chamber**.

With the AlveoLab, **new test protocols** can be easily designed to meet specific applications and make the alveograph analysis an even better predictor of **flour performance**.

For more information visit www.chopin.fr



Flash News !
Discover our latest innovation,
the **LabMill**.

Presented for the first time at AACCI
Centennial Meeting 2015
Booth 501/503

20, Avenue Marcellin Berthelot
92396 Villeneuve-la-Garenne - France

CHOPIN
TECHNOLOGIES

SCIENTIFIC POSTERS

Hall A, Convention Center

Taking photographs of displayed materials is prohibited without permission from authors.

Poster abstracts are available online at aacnet.org/meet. See left-side navigation option for "Searchable Abstracts." A PDF of poster abstracts is also available online.

POSTER HOURS

Monday, October 19

7:00 – 11:00 a.m.	Poster Set-Up by Authors
12:00 – 2:00 p.m.	Grand Opening Exhibition – Exhibits, Posters, and Lunch with Chef Demonstrations
12:00 – 7:00 p.m.	Poster Viewing
4:00 – 6:00 p.m.	Poster Viewing with Authors Student Poster Authors Present (4:00 – 4:30 p.m.) Poster Authors Present (odd-numbered posters 4:30 – 5:45 p.m.)

Tuesday, October 20

10:00 a.m. – 7:00 p.m.	Poster Viewing
12:00 – 2:00 p.m.	Exhibits, Posters, and Lunch with Chef Demonstrations
4:00 – 6:00 p.m.	Poster Viewing with Authors Poster Authors Present (even-numbered posters 4:15 – 5:30 p.m.)

Wednesday, October 21

8:30 – 10:00 a.m.	Exhibits, Poster Viewing and Coffee
10:30 a.m. – 12:30 p.m.	Poster Take-Down

POSTER CATEGORIES

Listed alphabetically by subject matter.

Alternative Ingredients for Grain-Based Foods (Posters 1 - 18)
 Analysis of Chemical Properties of Grains (Posters 19 - 29)
 Analysis of Physical Properties of Grains (Posters 30 - 40)
 Breeding & Agronomic Practices (Posters 41 - 43)
 Chemical Safety of Grains (Posters 45 - 49)
 Digestibility of Grains (Posters 50 - 61)
 Dough and Baking Quality Testing (Posters 62 - 74)
 Dough Rheology & Quality (Posters 75 - 84)
 Enzymes in Grains (Posters 85 - 88)
 Extrusion (Posters 89 - 99)
 Improving Bread Dough Properties (Posters 100 - 104)
 Improving the Health-Promoting Properties of Foods (Posters 106 - 119)
 Influence of Grain Components on Functionality (Posters 120 - 132)
 Microbiological Safety of Grains (Posters 133 - 134)
 Milling (Posters 135 - 144)
 Modelling (Posters 145 - 146)
 New Approaches for Production of Grain-Based Foods (Posters 147 - 158)
 New Approaches in Rice and Bean Processing (Posters 159 - 170)
 Non-Food Uses of Grains (Posters 171 - 177)
 Physical Chemistry of Foods (Posters 178 - 191)
 Physicochemical Properties of Grains (Posters 193 - 199)
 Starch Structure and Analysis (Posters 201 - 211)
 Structured Foods (Posters 212 - 220)
 Whole Grains, Dietary Fiber, and Phenolics (Posters 221 - 236)

POSTER TITLES AND AUTHORS

Listed by subject matter and scientific initiatives. Affiliations are listed as provided by the organizer/presenter.

Alternative Ingredients for Grain-Based Foods

Scientific Initiative: *Ingredients & Innovations*

- 1-P Preparation and properties of protein concentrates prepared by aqueous alcohol washing of air-classified pulse protein.**
 R. Peter (1), V. Meda (2), R. T. TYLER (2); (1) Univ of Saskatchewan, Saskatoon, SK, Canada; (2) University of Saskatchewan, Saskatoon, SK, Canada
- 2-P Evaluation of the quality of nixtamalized tortillas enriched with soybean bagasse.**
 K. E. HERNÁNDEZ REYES (1), C. García Villanueva (2), L. Ortega Castillo (1), V. S. Estrada Flores (2), G. Montemayor Mora (2), E. Pérez Carillo (2), S. O. Serna Saldívar (3); (1) Tecnológico de Monterrey, Monterrey, Mexico; (2) Tecnológico de Monterrey, Monterrey, Mexico; (3) Departamento de Biotecnología e Ingeniería de Alimentos, Centro de Biotecnología, Tecnológico de Monterrey, Monterrey, Mexico
- 3-P The effect of sprouted grain flour concentration on physical and textural properties of whole wheat pan bread.**
 M. FELDPAUSCH (1), S. Cropper (2), J. Faubion (2), D. Krishock (2); (1) Kansas State University, Hastings, MI, U.S.A.; (2) Kansas State University, Manhattan, KS, U.S.A.
- 4-P WITHDRAWN**
- 5-P Using germinated grains as a breadmaking ingredient.**
 A. PAGANI (1), M. Marengo (2), A. Marti (2), M. Zanoletti (2), S. Benedetti (2), S. Buratti (2), A. Barbiroli (2), S. Iametti (2), L. Quaglia (3); (1) University of Milan, Milano, Italy; (2) University of Milan, Milan, Italy; (3) Molino Quaglia, Vighizzolo d'Este, Italy
- 6-P Physicochemical characterization of common bean (*Phaseolus vulgaris*) starches grown in Brazil.**
 I. M. DEMIATE (1), A. F. Mileo (2), M. E. B. Zortea (1), H. Yangcheng (1), X. Li (1), J. L. Jane (1); (1) Iowa State University, Ames, IA, U.S.A.; (2) State University of Ponta Grossa, Ponta Grossa, Brazil
- 7-P Use of a fermented soy ingredient to enhance saltiness and overall flavor in hot dog buns.**
 M. BAKKE (1); (1) Kikkoman USA R&D Laboratory, Inc., Madison, WI, U.S.A.
- 8-P WITHDRAWN**
- 9-P Effectiveness of wheat protein isolates as egg replacers in bakery products.**
 E. FORT (1), R. Miller (1), M. Angermayer (1), K. Brackebusch (1); (1) Kansas State University, Manhattan, KS, U.S.A.
- 10-P Influence of amylase addition on physical and textural properties of cassava fiber-enriched wheat bread.**
 E. RODRIGUEZ-SANDOVAL (1), L. E. Sánchez-Agreto (1), E. M. Cadena-Chamorro (1); (1) Universidad Nacional de Colombia, Medellín, Colombia
- 11-P WITHDRAWN**
- 12-P Challenges and ingredient solutions for replacing egg whites in baked goods.**
 M. Yurgec (1), D. UZUNALIOGLU (1); (1) Ingredient, Bridgewater, NJ, U.S.A.
- 13-P WITHDRAWN**
- 14-P WITHDRAWN**

continued

- 15-P Influence of extruded rice and wheat flours and particle size on the rheological and textural properties of cold sauces.**
L. ROMÁN (1), M. Gómez (1); (1) University of Valladolid, Palencia, Spain
- 16-P Hairless canary seed: a promising alternative source for small starch granules.**
E. ABDELAAL (1), S. M. Razavi (2), M. Irani (3), P. Hucl (4), C. A. Patterson (5); (1) Agric and Agri-Food Canada, Guelph, ON, Canada; (2) Ferdowsi University of Mashhad, Department of Food Science and Technology, Mashhad, Iran; (3) Ferdowsi University of Mashhad International Campus, Department of Food Science and Technology, Mashhad, Iran; (4) University of Saskatchewan, Crop Development Centre, Saskatoon, SK, Canada; (5) The Pathfinders Research & Management Ltd, Saskatoon, SK, Canada
- 17-P Analysis of ascorbic acid effects on dough properties during proofing.**
G. VERICEL (1), L. Bosc-Bierne (2); (1) CHOPIN Technologies, Villeneuve la Garenne, France; (2) CHOPIN Technologies, Villeneuve-la-Garenne, France
- 18-P Effect of fermented products on sensory and physical properties of wheat flour tortillas.**
S. K. PASUPULETI (1); (1) Oklahoma State University, Stillwater, OK, U.S.A.

Analysis of Chemical Properties of Grains

Scientific Initiative: Quality & Analytical Methods

- 19-P Accurate measurement of soya proteins in food by ELISA.**
M. LACORN (1), S. Siebeneicher (1), T. Weiss (1), T. Dubois (1), U. Maelzer (1), S. Haas-Lauterbach (1); (1) R-Biopharm AG, Darmstadt, Germany
- 20-P Novel chromatographic and spectroscopic profiling approaches to characterize pseudocereal non-starch polysaccharides.**
D. WEFERS (1), M. Bunzel (1); (1) Karlsruhe Institute of Technology, Karlsruhe, Germany
- 21-P Size exclusion HPLC of proteins for evaluation of durum wheat quality.**
J. B. OHM (1), E. M. Elias (2), F. Manthey (2); (1) USDA ARS Cereal Crops Research Unit, Hard Spring and Durum Wheat Quality Lab, Fargo, ND, U.S.A.; (2) Department of Plant Sciences, North Dakota State University, Fargo, ND, U.S.A.
- 22-P *WITHDRAWN*
- 23-P *WITHDRAWN*
- 24-P Extraction of soluble dietary fibers from wheat bran and barley grain using ultrasonication and homogenization.**
A. Ahmad (1), B. K. BAIK (2); (1) Ohio State University/PMAS-Arid Agriculture University, Department of Food Technology, Rawalpindi, Pakistan; (2) USDA ARS CSWQRU Soft Wheat Quality Laboratory, Wooster, OH, U.S.A.
- 25-P A screening method for determining relative average degree of channelization within maize starch granule populations.**
Y. H. CHAO (1), K. C. Huber (2); (1) University of Idaho, Moscow, ID, U.S.A.; (2) Brigham Young University Idaho, Rexburg, ID, U.S.A.
- 26-P *WITHDRAWN*
- 27-P Quantitative analysis of genetically engineered traits in grain samples using droplet digital PCR.**
T. DEMEKE (1), M. Holigroski (1), M. Eng (1); (1) Canadian Grain Commission, Winnipeg, MB, Canada
- 28-P Statistical analysis of starch structural measures- a combined NMR, FTIR-ATR, DSC and XRD study.**
F. J. WARREN (1), M. J. Gidley (1), B. Flanagan (1); (1) University of Queensland, Brisbane, Australia
- 29-P Equivalence of near infrared transmission instruments for grain analysis.**
C. HURBURGH (1), S. McGinnis (1), G. Ripplke (1); (1) Iowa State Univ, Ames, IA, U.S.A.
- Analysis of Physical Properties of Grains**
Scientific Initiative: Quality & Analytical Methods
- 30-P Lubrication and rheological properties of swollen starch ghost suspensions from maize and potato.**
B. ZHANG (1), N. Selway (2), K. J. Shelat (2), S. Dhital (2), J. R. Stokes (2), M. J. Gidley (3); (1) Purdue University, West Lafayette, IN, U.S.A.; (2) University of Queensland, Brisbane, Australia; (3) University of Queensland, Brisbane, U.S.A.
- 31-P Tempered wheat kernels and their doughs: a study of viscoelasticity for indirect distinctions among wheat classes.**
N. PONCE GARCÍA (1), B. Ramírez Wong (2), P. Torres Chávez (3), J. d. Figureoa Cárdenas (4), S. O. Serna Saldívar (5), M. O. Cortez Rocha (3), A. Escalante Aburto (6); (1) UAEMex Campus Universitario "El Cerrillo", Toluca, Mexico; (2) Departamento de Investigación y Posgrado, Universidad de Sonora, Hermosillo, Mexico; (3) Departamento de Investigación y Posgrado, Universidad de Sonora, Hermosillo, Mexico; (4) CINVESTAV-IPN Unidad Querétaro, Querétaro, Mexico; (5) Departamento de Biotecnología e Ingeniería de Alimentos, Centro de Biotecnología, Tecnológico de Monterrey, Monterrey, Mexico; (6) CINVESTAV-IPN Unidad Querétaro, Querétaro, Moldova
- 32-P Viscoelastic properties of tablets from Osborne solubility fractions, pentosans, flour and bread using relaxation tests.**
J. d. FIGUEROA CARDENAS (1), A. Escalante Aburto (2), J. J. Vélez-Medina (3), Z. J. Hernández-Estrada (4), P. Rayas Duarte (4), S. Simsek (5), N. Ponce-García (6); (1) CINVESTAV Unidad Querétaro, Querétaro, Qro, Mexico; (2) CINVESTAV-IPN Unidad Querétaro, Querétaro, Mexico; (3) Cinvestav- Unidad Querétaro, Querétaro, Mexico; (4) Robert M. Kerr Food & Agricultural Products Center, Biochemistry and Molecular Biology, Oklahoma State University, Stillwater, OK, U.S.A.; (5) North Dakota State University, Fargo, ND, U.S.A.; (6) UAEMex Campus Universitario "El Cerrillo", Toluca, Mexico
- 33-P Evaluating cooked macaroni hardness with Kramer Shear cell, wire mesh extrusion fixture, and Ottawa cell.**
Y. LIU (1), F. Manthey (2); (1) North Dakota State University, Fargo, ND, U.S.A.; (2) North Dakota State Univ, Fargo, ND, U.S.A.
- 34-P Developing an objective method for measuring firmness of cooked noodles to characterize diverse Asian noodles qualities.**
H. OKUSU (1); (1) Nippon Flour Mills Co Ltd, Kanagawa, Japan
- 35-P Automated solvent retention capacity system for the evaluation of soft and hard wheat flour functionality.**
A. DUBAT (1), G. Tawil (1), M. Berra (1), O. Le Brun (1), G. Vericel (1); (1) CHOPIN Technologies, Villeneuve la Garenne, France
- 36-P Texture evaluation of porous foods by acoustic emission measurement and compression fracture test.**
N. ITO (1), K. Sato (2), T. Miyoshi (3), M. Miura (4); (1) Graduate School of Agriculture, Iwate University, Morioka, Japan; (2) Graduate School of Engineering, Iwate University, Morioka, Japan; (3) Faculty of Engineering, Iwate University, Morioka, Japan; (4) Faculty of Agriculture, Iwate University, Morioka, Japan
- 37-P Comparison of local small scale surface characteristics in native and processed wheat bran using atomic force microscopy.**
H. Koivula (1), E. Arte (2), A. Määttänen (3), P. Ihalainen (4), R. Coda (2), J. Peltonen (5), K. KATINA (2); (1) Univ of Helsinki, Helsinki, Finland; (2) University of Helsinki, Helsinki, Finland; (3) Abo Akademi, Turku, Finland; (4) Åbo Akedemi, Turku, Finland; (5) Åbo Akademi, Turku, Finland
- 38-P Ultrasound: a new tool for texture evaluation of raw Asian noodles.**
A. SALIMI KHORSHIDI (1), A. Strybulevych (1), D. Daugelaite (1), M. G. Scanlon (1), J. H. Page (1), D. W. Hatcher (2); (1) University of Manitoba, Winnipeg, MB, Canada; (2) Canadian Grain Commission, Winnipeg, MB, Canada
- 39-P A novel method for evaluating changes in raw Asian noodles texture during sheeting process.**
A. SALIMI KHORSHIDI (1), A. Strybulevych (1), D. Daugelaite (1), M. G. Scanlon (1), J. H. Page (1), D. W. Hatcher (2); (1) University of Manitoba, Winnipeg, MB, Canada; (2) Canadian Grain Commission, Winnipeg, MB, Canada

continued

- 40-P Use of FTIR spectroscopy and ultrasonics for investigating salt reduction in nonyeasted bread doughs.**
F. KOKSEL (1), K. M. Gough (1), M. G. Scanlon (2), M. T. Nickerson (3); (1) University of Manitoba, Winnipeg, MB, Canada; (2) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada; (3) Department of Food and Bioproduct Sciences, University of Saskatchewan, Saskatoon, SK, Canada

Breeding & Agronomic Practices

Scientific Initiative: Biotechnology & Sustainability

- 41-P Delayed harvest affects quality of durum wheat.**
P. CABAS-LUHMANN (1), E. Elias (1), F. Manthey (2); (1) North Dakota State University, Fargo, ND, U.S.A.; (2) North Dakota State Univ, Fargo, ND, U.S.A.
- 42-P Effects of agronomic practices and soil and climatic zones on the content and properties of dietary fibre in barley.**
M. IZYDORCZYK (1), T. McMillan (1), A. Kormendi (1), S. Bazin (1), J. O'Donovan (2); (1) Canadian Grain Commission, Winnipeg, MB, Canada; (2) Agriculture and Agri-Food Canada, Lacombe, AB, Canada
- 43-P Phenotypic diversity in *Avena* species.**
S. S. MILLER (1), A. Kaka (2), C. P. Wight (1), N. A. Tinker (1); (1) Agriculture and Agri-Food Canada, Ottawa, ON, Canada; (2) La Cité Collège d'Arts Appliqués et de Technologie, Ottawa, ON, Canada

Chemical Safety of Grains

Scientific Initiative: Food Safety & Regulatory

- 44-P WITHDRAWN**
- 45-P The role of transgenic corn hybrids in reducing contamination by mycotoxins.**
H. K. ABBAS (1), N. Bellaloui (1), H. A. Bruns (1); (1) USDA ARS, Stoneville, MS, U.S.A.
- 46-P Identification of the production area of wheat using trace-element concentrations and heavy element isotopic ratios.**
Y. Ishida (1), K. NAKAMURA (1), K. Ariyama (2), A. Kawasaki (3); (1) Nisshin Flour Milling Inc., Tsukuba-city Ibaraki, Japan; (2) Japan grain inspection association, Koto-ku Tokyo, Japan; (3) National Institute for Agro-Environmental Sciences, Tsukuba-city Ibaraki, Japan
- 47-P Characterization of chemical composition and contaminants in distillers grains as feed ingredient.**
K. M. LEE (1), T. J. Herrman (2); (1) Texas A&M AgriLife Research, College Station, TX, U.S.A.; (2) Texas A&M University, College Station, TX, U.S.A.
- 48-P Phytochemical response to *Fusarium* in Chinese spring wheat and a line containing a chromosome fragment from *Thinopyrum*.**
S. S. MILLER (1), T. Delorme (2), E. M. Watson (3); (1) Agriculture and Agri-Food Canada, Ottawa, ON, Canada; (2) University of Ottawa, Ottawa, ON, Canada; (3) Agriculture and AgriFood Canada, Ottawa, ON, Canada
- 49-P A wheat immature spike culture screening method to identify *Fusarium* head blight (FHB) resistant wheat genotypes.**
C. HUANG (1), P. Sharma (1), M. Gangola (1), R. Kutcher (1), R. N. Chibbar (1); (1) University of Saskatchewan, Saskatoon, SK, Canada

Digestibility of Grains

Scientific Initiative: Health & Nutrition

- 50-P Towards developing plants with improved digestibility and other functional properties.**
R. G. GILBERT (1), C. Li (2); (1) Univ of Queensland, Brisbane, Australia; (2) University of Queensland, Brisbane, QLD, Australia
- 51-P Does starch-protein-lipid interactions account for the low glycaemic property of millets?**
G. A. ANNOR (1), M. Marcone (2), E. Bertoft (3), K. Seetharaman (4); (1) University of Ghana, Accra, Ghana; (2) University of Guelph, Guelph, ON, Canada; (3) Åbo Akademi University, Turku, Finland; (4) University of Minnesota, St. Paul, MN, U.S.A.

- 52-P Factors affecting starch composition and digestibility in white and whole wheat breads.**
K. WHITNEY (1), S. Simsek (2); (1) North Dakota State Univ, Fargo, ND, U.S.A.; (2) North Dakota State University, Fargo, ND, U.S.A.
- 53-P Influence of plant proteins in their native and hydrolysed forms on wheat starch amylolysis.**
N. LOPEZ (1), T. Vasanthan (1), R. Hoover (2); (1) University of Alberta, Edmonton, AB, Canada; (2) Memorial University of Newfoundland, St John's, Canada
- 54-P Effect of different nixtamalization processes on physicochemical properties, nutritional composition and glycemic index.**
R. M. MARISCAL MORENO (1), J. d. Figueroa Cardenas (2), D. Santiago Ramos (3), J. J. Véles-Medina (1), G. Arámbula Villa (1), S. J. Jiménez Sandoval (1), P. Rayas Duarte (4), H. E. Martínez Flores (5); (1) CINVESTAV Unidad Querétaro, Querétaro, Mexico; (2) CINVESTAV Unidad Querétaro, Querétaro, Qro, Mexico; (3) Programa de Posgrado en Alimentos del Centro de la República, Universidad Autónoma de Querétaro, Querétaro, Mexico; (4) Robert M. Kerr Food & Agricultural Products Center, Biochemistry and Molecular Biology, Oklahoma State University, Stillwater, OK, U.S.A.; (5) Facultad de Químico Farmacobiología, Universidad Michoacana de San Nicolás de Hidalgo, Morelia, Mexico
- 55-P Glycemic index and bread quality characteristics of soy protein fortified bread.**
C. HALL (1), N. Fujiwara (2); (1) North Dakota State Univ, Fargo, ND, U.S.A.; (2) Northern Crops Institute, Fargo, ND, U.S.A.
- 56-P Physicochemical and in vitro digestion properties of swollen maize starch complexed with maize oil and zein protein.**
X. CHEN (1), X. He (1), Q. Huang (1); (1) South China Univ of Technology, Guangzhou, China
- 57-P Glycemic response of ancient and genetically modified barley lines using both static and dynamic digestion models.**
D. SAGNELLI (1), S. Chessa (2), M. Di Martino (3), J. Bao (4), A. Blennow (1), K. Hebelstrup (5); (1) University of Copenhagen, Frederiksberg, Denmark; (2) Institute of Food Research/ The Model Gut group, Norwich, United Kingdom; (3) University of Naples, Naples, Denmark; (4) Zhejiang University, Hangzhou, China; (5) Aarhus University, Aarhus, Denmark
- 58-P Growth rate of a human gut symbiont on starch is source dependent.**
Y. E. TUNCIL (1), E. C. Martens (2), B. R. Hamaker (3); (1) Purdue University, West Lafayette, IN, U.S.A.; (2) University of Michigan Medical School Department of Microbiology and Immunology, Ann Arbor, MI, U.S.A.; (3) Whistler Center for Carbohydrate Research and Department of Food Science, Purdue University, West Lafayette, IN, U.S.A.
- 59-P Sorghum and millet exhibit slower gastric emptying than pasta, potatoes, and rice.**
A. M. HAYES (1), F. Cisse (2), D. P. Erickson (3), A. R. Opekun (4), B. L. Nichols (4), B. R. Hamaker (1); (1) Whistler Center for Carbohydrate Research and Department of Food Science, Purdue University, West Lafayette, IN, U.S.A.; (2) Institut d'Economie Rurale du Mali (IER), Bamako, Mali; (3) Nestle Purina North America, St. Louis, MO, U.S.A.; (4) Departments of Medicine & Pediatrics G.I. & S.A.H.S., Baylor College of Medicine, Houston, TX, U.S.A.
- 60-P Mucosal alpha-glucosidases on starch glucogenesis in animal models.**
A. M. LIN (1), R. Quezada-Calvillo (2), S. K. Chacko (3), S. I. Oda (4), B. R. Nichols (3); (1) University of Idaho and Washington State University, Moscow, ID, U.S.A.; (2) Universidad Autonoma De San Luis Potosí, San Luis Potosí, ID, Mexico; (3) Children's Nutrition Research Center at Baylor College of Medicine and Texas Children's Hospital, Houston, TX, U.S.A.; (4) Okayama University of Science, Okayama, ID, Japan
- 61-P Effects of moisture content during extrusion of whole grain oats on in vitro fermentation by human fecal microbiota.**
S. BRAHMA (1), S. A. Weier (2), D. J. Rose (1); (1) Univ of Nebraska, Lincoln, NE, U.S.A.; (2) Univ of Nebraska, LINCOLN, NE, U.S.A.



AACC
INTERNATIONAL
Booth
#117

*With one degree of separation from the farm,
we are your ingredient solutions provider.*

Grains • Seeds • Pulses • Soybeans
Sprouted | Blended | Cracked | Flaked/Flour

A custom blend of *ancient grains*,
AncientGrisps™ are whole grain and
naturally gluten-free.

Visit our
booth and try an
AncientGrisps™ bar.



AncientGrisps™



www.hesco-inc.com
hescoinc@hesco-inc.com
Watertown, SD USA



SK FOOD
INTERNATIONAL

www.skfood.com
skfood@skfood.com
Fargo, ND USA

© 2015 Healthy Food Ingredients

Safe, quality foods start here

Dough and Baking Quality Testing

Scientific Initiative: Quality & Analytical Methods

- 62-P Test baking: a new method with improved discriminating power.**
B. DUPUIS (1), B. X. Fu (1); (1) Canadian Grain Commission, Winnipeg, MB, Canada
- 63-P Predicting wheat flour functionality with SDS sedimentation and GlutoPeak tests.**
A. Mahendru (1), G. KAUR CHANDI (2), A. Kumar Ahlawat (3); (1) Division of Genetics, Indian Agricultural Research Institute, New Delhi, India; (2) Brabender® GmbH & Co. KG, Duisburg, Germany; (3) 2Division of Genetics, Indian Agricultural Research Institute, New Delhi, India
- 64-P Quality requirements of soft red winter wheat for making steamed bread.**
F. Ma (1), B. K. BAIK (2); (1) Ohio State University/USDA ARS CSWQRU, Wooster, OH, U.S.A.; (2) USDA ARS CSWQRU, Wooster, OH, U.S.A.
- 65-P Prediction of Mixolab parameters by using single kernel characterization system.**
O. ACAR (1), H. Kokselsel (2), T. Sanal (1); (1) Central Research Institute for Field Crops, Ankara, Turkey; (2) Hacettepe University, Ankara, Turkey
- 66-P Improved method for measuring whole wheat flour mixing properties.**
R. MILLER (1), A. Oakley (1); (1) Kansas State University, Manhattan, KS, U.S.A.
- 67-P Pizza under the toppings: macro and microstructure of different Italian pizza types.**
A. PAGANI (1), F. Faoro (2), A. Marti (2), L. Quaglia (3), F. Racinelli (3); (1) University of Milan, Milano, Italy; (2) University of Milan, Milan, Italy; (3) Molino Quaglia, Vighizzolo d'Este, Italy
- 68-P Determining dough mixing properties from a single test in the doughLAB.**
M. BASON (1), J. Dang (2); (1) Perten Instruments AB, Hägersten, Sweden; (2) Perten Instruments Australia, Sydney, Australia
- 69-P The Rheo Extrusion Meter: a new device for measuring wheat flour baking absorption and dough consistency.**
K. BRIJS (1), B. Pareyt (1), J. Vanneste (1), J. A. Delcour (1); (1) KU Leuven, Leuven, Belgium
- 70-P Constant vs. optimized mixograph absorption and relationships to wheat gluten strength and insoluble glutenin content.**
C. ISAAK (1), H. Sapirstein (1), Y. Wu (1), R. Graf (2); (1) University of Manitoba, Winnipeg, MB, Canada; (2) AAFC Lethbridge Research Centre, Lethbridge, AB, Canada
- 71-P The use of synchrotron x-rays and ultrasonics for investigating the bubble size distribution and its evolution in dough.**
F. KOKSEL (1), A. Strybulevych (2), S. Aritan (3), V. Leroy (4), J. H. Page (5), M. G. Scanlon (6); (1) Univ of Manitoba, Winnipeg, MB, Canada; (2) University of Manitoba, Winnipeg, MB, Canada; (3) Biomechanics Research Group, Faculty of Sports Sciences, Hacettepe University, Ankara, Turkey; (4) Laboratoire MSC, Université Paris-Diderot, CNRS (UMR 7057), Paris, France; (5) U of Manitoba, Physics and astronomy department, Winnipeg, MB, Canada; (6) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada
- 72-P Fundamental measurement of rheology of soluble & insoluble fiber in dough systems.**
Y. ZHAO (1); (1) Kansas State Univ, Manhattan, KS, U.S.A.
- 73-P High-altitude baking mitigation - bread baking.**
J. HU (1), R. Ostrander (1), T. Pohlman (1), Y. Jiang (2); (1) Ardent Mills, Denver, CO, U.S.A.; (2) Ardent Mills, Denver, CO, Canada
- 74-P High altitude baking mitigation: cookie and cake bakings in Ardent Mills.**
Y. JIANG (1), R. Ostrander (2), T. Pohlman (3), J. Hu (1); (1) Ardent Mills, Denver, CO, U.S.A.; (2) Ardent Mills, Minnetonka, MN, U.S.A.; (3) Ardent Mills, Martins Creek, PA, U.S.A.

Dough Rheology & Quality

Scientific Initiative: Chemistry & Interactions

- 75-P Effects of glutenins on gluten viscoelasticity and relationships to the rheological and breadmaking properties of wheat.**
Z. J. HERNÁNDEZ-ESTRADA (1), P. Rayas-Duarte (1), J. D. C. Figueroa (2); (1) Oklahoma State University, Stillwater, OK, U.S.A.; (2) Cinvestav-IPN, Querétaro, Qro., Mexico
- 76-P The impact of resting time on dough rheology and bread quality in a no time dough system.**
L. CATO (1), J. Ma (1), S. Cuavain (2); (1) Australian Export Grains Innovation Centre, South Perth WA, Australia; (2) BakeTran, Freeland, Witney, United Kingdom
- 77-P Effect of enzymes and NaCl content on dough rheology using Harvest and Pembina CWRS wheat.**
E. J. HOPKINS (1), P. Hucl (2), M. G. Scanlon (3), M. T. Nickerson (4); (1) University of Saskatchewan, Saskatoon, SK, Canada; (2) University of Saskatchewan, Crop Development Centre, Saskatoon, SK, Canada; (3) U of Manitoba, Food science department, Winnipeg, MB, Canada; (4) Department of Food and Bioproduct Sciences, University of Saskatchewan, Saskatoon, SK, Canada
- 78-P WITHDRAWN**
- 79-P Effect of NaCl level on rheology, stickiness and extensibility of dough prepared from different CWRS wheat.**
N. A. AVRAMENKO (1), P. J. Hucl (2), M. G. Scanlon (3), M. T. Nickerson (1); (1) Department of Food and Bioproducts Sciences/University of Saskatchewan, Saskatoon, SK, Canada; (2) Crop Development Centre/University of Saskatchewan, Saskatoon, SK, Canada; (3) Department of Food Science/University of Manitoba, Winnipeg, MB, Canada
- 80-P Effect of salts from the lyotropic series on the handling of dough prepared from Harvest and Pembina CWRS wheat.**
N. A. AVRAMENKO (1), P. J. Hucl (2), M. G. Scanlon (3), M. T. Nickerson (1); (1) Department of Food and Bioproducts Sciences/University of Saskatchewan, Saskatoon, SK, Canada; (2) Crop Development Centre/University of Saskatchewan, Saskatoon, SK, Canada; (3) Department of Food Science/University of Manitoba, Winnipeg, MB, Canada
- 81-P WITHDRAWN**
- 82-P The effect of genotype on flour pasting and thermal properties of Australian desi chickpeas.**
C. C. CHIN (1), J. A. Wood (2), P. D. Prenzler (1), A. Saliba (1), C. Blanchard (3); (1) Charles Sturt University, ARC Industrial Transformation Training Centre for Functional Grains, E H Graham Centre for Agricultural Innovation, Wagga Wagga, Australia; (2) New South Wales Department of Primary Industries, Tamworth, Australia; (3) Charles Sturt University, ARC Industrial Transformation Training Centre for Functional Grains, E H Graham Centre for Agricultural Innovation, Wagga Wagga, Australia
- 83-P The effect of salt on dough properties of flour as measured by farinograph and extensigraph.**
J. SAKAMOTO (1), J. Suchy (2), B. Dupuis (2), B. X. Fu (2); (1) Nippon Flour Mills Co., Ltd., Tokyo, Japan; (2) Canadian Grain Commission, Winnipeg, MB, Canada
- 84-P Storage conditions influence increase in falling number of wheat grain.**
T. JI (1), B. K. Baik (1); (1) USDA ARS CSWQRU Soft Wheat Quality Laboratory, Wooster, OH, U.S.A.
- Enzymes in Grains**
Scientific Initiative: Biotechnology & Sustainability
- 85-P Comparison of the action of three GH 51 alpha-L-arabinofuranosidases on feruloylated arabinoxylan-oligosaccharides.**
R. R. SCHENDEL (1), A. K. Puchbauer (1), M. Bunzel (1); (1) Karlsruhe Institute of Technology, Karlsruhe, Germany
- 86-P New insights into the action mode of amylosucrase on amylopectin.**
h. ZHANG (1), X. Zhou (1), T. Wang (1), Y. Li (1), X. Luo (1), L. Wang (1), R. Wang (1), Z. chen (1); (1) Jiangnan University, Wuxi, China
- 87-P WITHDRAWN**

- 88-P Recombinant wheat protein disulfide isomerase and its effects on flour processing quality.**
T. T. Zhang (1), Y. Hou (1), L. Li (1), S. Q. HU (1); (1) South China University of Technology, Guangzhou, China

Extrusion

Scientific Initiative: Engineering & Processing

- 89-P Processing optimization of whole naked oat kernel extrusion.**
x. HU (1), z. zhang (1), x. li (1); (1) shaanxi normal university, xian, China
- 90-P A phenomenological model of starchy materials expansion by extrusion.**
M. Kristiawan (1), G. DELLA VALLE (2), A. Ndiaye (3), C. David (4), B. Vergnes (5); (1) INRA, Nantes, France; (2) INRA, Nantes Cedex 3, France; (3) INRA-Univ Bordeaux, Bordeaux, France; (4) SCC, SAINT-ETIENNE, France; (5) MINES ParisTech, Sophia-Antipolis, France
- 91-P Extrusion characteristics of proso millet (*Panicum miliaceum*) flour.**
P. GULATI (1), S. A. Weier (1), D. Santra (1), J. Subbiah (1), D. J. Rose (1); (1) University of Nebraska-Lincoln, Lincoln, NE, U.S.A.
- 92-P WITHDRAWN**
- 93-P Starch modification using reactive extrusion.**
X. Bao (1), A. Ali (1), D. Qiao (1), L. YU (2), H. Liu (1), L. Chen (1); (1) School of Food and Light Industry, South China University of Technology, Guangzhou, Guangdong, China; (2) School of Food and Light Industry, South China University of Technology, Guangzhou, Guangdong, China
- 94-P WITHDRAWN**
- 95-P The effect of feed moisture on the physical properties and *in vitro* digestibility of extruded rice and pinto bean flours.**
F. SUMARGO (1), S. A. Weier (1), D. J. Rose (1); (1) Univ of Nebraska, Lincoln, NE, U.S.A.
- 96-P Particulate flow measurements and implications in food extrusion.**
C. L. MCGUIRE (1), K. Ambrose (1), S. Alavi (1); (1) Kansas State University, Manhattan, KS, U.S.A.
- 97-P Effects of extrusion cooking process on Maillard Reaction Products.**
M. T. MASATCIOGLU (1), P. K. Ng (2), H. Koxsel (3); (1) Food Engineering Department, Mustafa Kemal University, Alahan, HATAY, Turkey; (2) Food Science and Human Nutrition Department, Michigan State University, East Lansing, MI, U.S.A.; (3) Food Engineering Department, Hacettepe University, Ankara, Turkey
- 98-P Modification of functional properties of dry bean powders by extrusion cooking.**
Y. AI (1), K. Cichy (2), J. B. Harte (1), J. D. Kelly (1), P. K. Ng (1); (1) Michigan State University, East Lansing, MI, U.S.A.; (2) USDA ARS for Sugarbeet and Bean Research in East Lansing, East Lansing, MI, U.S.A.
- 99-P Development of starch foam used as loss-fill materials.**
L. Meng (1), Z. Ji (1), L. YU (2), X. Xiao (1), H. Liu (1), L. Chen (1); (1) School of Food and Light Industry, South China University of Technology, Guangzhou, Guangdong, China; (2) School of Food and Light Industry, South China University of Technology, Guangzhou, China

Improving Bread Dough Properties

Scientific Initiative: Engineering & Processing

- 100-P Elongational properties and proofing behaviour of wheat flour dough.**
G. DELLA VALLE (1), A. Turbin-Orger (2), A. Shehzad (3), L. Chaunier (4), H. Chiron (4); (1) INRA, Nantes Cedex 3, France; (2) INRA & Arvalis, Nantes, France; (3) NIFSAT, UNiversity of Agriculture, Faisalabad, France; (4) INRA, Nantes, France
- 101-P Bran hydration and physical treatments improve the bread-baking quality of whole grain wheat flour.**
L. CAI (1), I. Choi (2), C. S. Park (3), B. K. Baik (4); (1) MGP Ingredients Inc., Atchison, KS, U.S.A.; (2) Rural Development Administration, National Institute of Crop Science, Suwon, Korea; (3) Chonbuk National University, Department of Crop Agriculture and Life Science, Jeonju, Korea; (4) USDA ARS CSWQRU Soft Wheat Quality Laboratory, Wooster, OH, U.S.A.

- 102-P Experimental data and modeling of the electrical properties of bread dough during proofing and ERO Baking.**
S. ANGALET (1); (1) Angalet Group International, Elmhurst, IL, U.S.A.
- 103-P Effect of puroindolines on dough rheological properties.**
E. T. QUAYSON (1), A. Marti (2); (1) University of Minnesota, St. Paul, MN, U.S.A.; (2) University of Minnesota, St Paul, MN, U.S.A.
- 104-P Water and salt effect on dough mechanical properties.**
X. SUN (1), F. Koxsel (1), M. G. Scanlon (1), M. T. Nickerson (2); (1) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada; (2) Department of Food and Bioproduct Sciences, University of Saskatchewan, Saskatoon, SK, Canada
- 105-P WITHDRAWN**

Improving the Health-Promoting Properties of Foods

Scientific Initiative: Ingredients & Innovations

- 106-P PHO emulsifier reformulation.**
J. DOUCET (1); (1) Corbion, Lenexa, KS, U.S.A.
- 107-P Salt substitution with a potassium based salt in bread.**
P. RAYAS-DUARTE (1), S. Rao (2), Z. J. Hernández-Estrada (3), S. Keys (2); (1) Oklahoma State University, Stillwater, OK, U.S.A.; (2) NuTek Food Science, Omaha, NE, U.S.A.; (3) Robert M. Kerr Food & Agricultural Products Center, Biochemistry and Molecular Biology, Oklahoma State University, Stillwater, OK, U.S.A.
- 108-P Use of faba beans as protein source for cereal applications.**
N. Sozer (1), N. Rosa Sibakov (1), L. Melama (1), S. Silbir (2), V. Micard (3), R. L. Heiniö (1), T. HAKALA (1); (1) VTT Technical Research Centre of Finland Ltd, Espoo, Finland; (2) Ege University, Food Engineering Department, Izmir, Turkey; (3) SupAgro-INRA, Montpellier, France
- 109-P Modification of oat and barley beta-glucan for liquid food applications.**
J. K. Sibakov (1), T. Hakala (1), M. Nappa (1), E. Aktas (1), O. Santala (1), A. KAUKOVRTA-NORJA (1), K. Poutanen (1); (1) VTT Technical Research Centre, Espoo, Finland
- 110-P Cookie dough and baking quality of pulse flour cookies.**
M. SINGH (1), J. A. Byars (1); (1) USDA ARS, Peoria, IL, U.S.A.
- 111-P WITHDRAWN**
- 112-P Effects of dietary fibers on dough rheological behavior and final products.**
G. VERICEL (1), L. Bosc-Bierne (2), F. Gras (3); (1) CHOPIN Technologies, Villeneuve la Garenne, France; (2) CHOPIN Technologies, Villeneuve-la-Garenne, France; (3) Rettenmaier, Saint Germain en Laye, France
- 113-P Assessing deodorized pea flour as an ingredient in sugar cookies.**
C. HILLEN (1), C. Hall (1); (1) North Dakota State University, Fargo, ND, U.S.A.
- 114-P The addition of pulse flours in gluten-free bread formulations and their effect on bread quality.**
L. BOURRÉ (1), H. Maskus (2); (1) Canadian Intl Grains Inst, Winnipeg, MB, Canada; (2) Canadian International Grains Institute, Winnipeg, MB, Canada
- 115-P Composition, functional properties, and cookie-baking performance of dry bean powders from 25 Michigan-grown cultivars.**
Y. AI (1), Y. Jin (1), J. D. Kelly (1), P. K. Ng (1); (1) Michigan State University, East Lansing, MI, U.S.A.
- 116-P Potential sugar reduction in cookie formulations with sucrose alternatives.**
M. KWEON (1), L. Slade (2), H. Levine (2); (1) Pusan National University, Busan, Korea; (2) Food Polymer Science Consultancy, Morris Plains, NJ, U.S.A.
- 117-P Isolation of pentosan from rye bran as a natural hydrocolloid in gluten-free bread.**
S. D'Amico (1), K. Török (2), S. Tömösközi (2), R. SCHOENLECHNER (1); (1) Univ of Natural Resources and Life Sciences, Vienna, Austria; (2) Faculty of Chemical Technology and Biotechnology, Budapest University of Technology and Economics, Budapest, Hungary, Budapest, Hungary

continued

118-P Evaluation of the quality of wheat flour tortillas enriched with soybean bagasse.

G. MONTEMAYOR MORA (1), K. E. Hernández Reyes (1), E. Heredia Olea (1), E. Pérez Carillo (1), A. A. Chew Guevara (1), S. O. Serna Saldivar (2); (1) Tecnológico de Monterrey, Monterrey, Mexico; (2) Departamento de Biotecnología e Ingeniería de Alimentos, Centro de Biotecnología, Tecnológico de Monterrey, Monterrey, Mexico

119-P Effect of direct mineral and vitamin fortification on taste of rice-based products.

J. MANFUL (1), M. Owusu (2), L. Hagan (2), S. Ndindeng (1), S. Graham-Acquaah (1); (1) Africa Rice Center, Cotonou, Benin; (2) CSIR - Food Research Institute, Accra, Ghana

Influence of Grain Components on Functionality

Scientific Initiative: Chemistry & Interactions

120-P Effect of sorghum proanthocyanidin interaction with gluten on dough rheology.

A. L. GIRARD (1), J. M. Awika (1); (1) Texas A&M University, College Station, TX, U.S.A.

121-P Effect of hydrocolloids on functional properties of navy bean starch.

J. A. BYARS (1), M. Singh (1), J. A. Kenar (1); (1) USDA ARS, Peoria, IL, U.S.A.

122-P Properties of amylose-oleic acid inclusion complexes from corn starch grafted with poly(methyl acrylate).

F. C. FELKER (1), V. L. Finkenstadt (1), G. R. Selling (1), G. F. Fanta (1), K. Hornback (1); (1) USDA ARS NCAUR, Peoria, IL, U.S.A.

123-P Antioxidant activity of phenolic acid and yellow pigment extracts in milling fractions of durum wheat.

C. Chiremba (1), S. Nam (1), D. Taylor (1), C. Pozniak (2), B. X. FU (1); (1) Canadian Grain Commission, Winnipeg, MB, Canada; (2) University of Saskatchewan, Saskatoon, SK, Canada

124-P Effect of organic acids and NaCl content on dough stickiness using Harvest and Pembina CWRS wheat.

E. J. HOPKINS (1), R. Lam (1), A. K. Stone (2), P. Hucl (3), M. G. Scanlon (4), M. Nickerson (5); (1) University of Saskatchewan, Saskatoon, SK, Canada; (2) University of Saskatchewan, Saskatoon, SK, Canada; (3) University of Saskatchewan, Crop Development Centre, Saskatoon, SK, Canada; (4) U of Manitoba, Food science department, Winnipeg, MB, Canada; (5) Department of Food and Bioproduct Sciences, University of Saskatchewan, Saskatoon, SK, Canada

125-P Effect of puroindolines on protein characteristics in flour and dough.

E. T. QUAYSON (1), F. Bonomi (2), A. Marti (1); (1) University of Minnesota, St. Paul, MN, U.S.A.; (2) Univeristy of Milan, Milan, Italy

126-P Effects of damaged starch and protein contents on pasting properties of flours composing of wheat and rice flours.

J. H. LIN (1), W. T. Kao (2), W. S. Chang (3), Y. H. Chang (4); (1) Department of Hospitality Management, MingDao University, Changhua, Taiwan, ChangHua, Taiwan; (2) Department of Food and Nutrition, Providence University, Taichung, Taiwan; (3) Department of Food and Nutrition, Providence University, Taichung, Taiwan, Taichung, Taiwan; (4) Providence University, Shalu, Taichung, Taiwan

127-P Effects of concentration and hydrolysis on solubility and foaming properties of hull-less barley protein concentrates.

E. Sirin (1), E. YALÇIN (1); (1) Department of Food Engineering, Abant Izzet Baysal University, Bolu, Turkey

128-P Correlations between gluten aggregation properties and content of quality-related protein fractions of wheat flour.

A. MARTI (1), E. Augst (2), S. Cox (2), P. Koehler (3); (1) University of Minnesota, St Paul, MN, U.S.A.; (2) General Mills Inc, Minneapolis, MN, U.S.A.; (3) Deutsche Forschungsanstalt für Lebensmittelchemie, Freising, Germany

MEASURING WHAT MATTERS

Visit us and schedule a conversation about your testing plan.



Booth# 509 and 511



The quality of your food product affects the eating experience for your consumers and those they care most about.

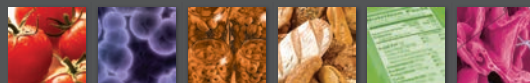
With over 40 years of analytical food testing experience, Medallion Labs is the expert on Measuring What Matters! We would like to invite you to meet with us at the AACC Centennial Meeting, talk with our experts about **Protein Quality, Shelf Life and Nutrient Labeling.**

Let us show you how our insights can shape your business!



Medallion Labs

www.medallionlabs.com



- 129-P Changes in levels of enzyme inhibitors, lectins and phytic acid undergoing domestic processing of Canadian pulses.**
L. SHI (1), K. Mu (1), S. Arntfield (1), M. Nickerson (2); (1) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada; (2) Department of Food and Bioproduct Sciences, University of Saskatchewan, Saskatoon, SK, Canada
- 130-P Physicochemical properties of normal, immature, and chalky brown rice kernels from six U.S. long-grain rice cultivars.**
A. I. GONZALEZ CONDE (1), J. A. Patindol (1), D. Lujan Rhenals (1), Y. J. Wang (1); (1) University of Arkansas, Fayetteville, AR, U.S.A.
- 131-P A comparative study on the nutritional composition of purple barley, yellow corn, and wheat aleurone.**
V. NDOLO (1), T. Beta (2), R. G. Fulcher (1); (1) University of Manitoba, Winnipeg, MB, Canada; (2) Department of Food Science, & Richardson Centre for Functional Foods and Nutraceuticals, University of Manitoba, Winnipeg, MB, Canada
- 132-P Characterization of starch from 34 Michigan soft wheat varieties.**
Y. Jin (1), Y. Ai (1), E. Olson (1), P. K. Ng (1); (1) Michigan State University, East Lansing, MI, U.S.A.

Microbiological Safety of Grains

Scientific Initiative: Food Safety & Regulatory

- 133-P The lethality of a commercial batch process on *Salmonella* in flour.**
J. R. FUDGE (1), M. L. Dunn (1), F. M. Steele (1), O. A. Pike (1), R. A. Robison (1); (1) Brigham Young University, Provo, UT, U.S.A.
- 134-P Microbial load of hard winter wheat varieties produced at three growing environments across the state of Nebraska, USA.**
L. Sabillon (1), A. BIANCHINI (2), J. Stratton (1), D. Rose (2), T. Regassa (1), R. Flores (1); (1) University of Nebraska-Lincoln, Lincoln, NE, U.S.A.; (2) University of Nebraska-Lincoln, Lincoln, NE, U.S.A.

Milling

Scientific Initiative: Engineering & Processing

- 135-P Use of a centrifugal mill to produce whole-wheat durum flour.**
L. DENG (1), F. Manthey (2); (1) North Dakota State University, Fargo, ND, U.S.A.; (2) North Dakota State Univ, Fargo, ND, U.S.A.
- 136-P Degree of starchy endosperm separation from bran as a milling quality trait of wheat grain.**
L. KONG (1), B. K. Baik (2); (1) Ohio State University, Department of Horticulture and Crop Science/USDA-ARS-CSWQRU, Wooster, OH, U.S.A.; (2) USDA ARS CSWQRU Soft Wheat Quality Laboratory, Wooster, OH, U.S.A.
- 137-P WITHDRAWN**
- 138-P A modified protocol for producing whole-wheat flour from a standard CHOPIN CD1 laboratory mill.**
A. DUBAT (1); (1) CHOPIN Technologies, Villeneuve la Garenne, France
- 139-P Modeling of cumulative ash curve in hard red spring wheat.**
T. BAASANDORJ (1), L. Dykes (2), J. Ohm (2), S. Simsek (1); (1) NDSU Department of Plant Science, Fargo, ND, U.S.A.; (2) USDA ARS, Fargo, ND, U.S.A.
- 140-P Effect of seed treatments on flour quality of black beans (*Phaseolus vulgaris* L.) milled on a centrifugal mill.**
H. ANDO (1), C. Carter (1), F. Manthey (1); (1) North Dakota State Univ, Fargo, ND, U.S.A.
- 141-P Dry milling, wet milling and dry grind yield comparisons of purple corn and yellow dent corn.**
P. SOMAVAT (1), E. de Mejia (2), Q. Li (2), V. Singh (2); (1) University of Illinois at Urbana Champaign, Champaign, IL, U.S.A.; (2) University of Illinois at Urbana Champaign, Urbana, IL, U.S.A.
- 142-P Effect of different tempering methods on sorghum kernel physical and milling characteristics.**
Y. ZHAO (1), K. Ambrose (2); (1) Kansas State University, Manhattan, KS, U.S.A.; (2) Kansas State University, Manhattan, KS, U.S.A.

- 143-P Fiber recovery from whole stillage in dry grind process.**
S. M. KIM (1), S. Li (1), R. Basu (2), P. van Egmond (3), V. Singh (4); (1) University of Illinois, Urbana-Champaign, Urbana, IL, U.S.A.; (2) DSM, Bio-based Products & Services, Elgin, IL, U.S.A.; (3) DSM, Bio-based Products & Services, Elgin, IL, U.S.A.; (4) University of Illinois, Urbana-Champaign, Urbana, IL, U.S.A.
- 144-P Does bran particle size affect whole-wheat bread quality?**
K. H. KHALID (1), L. Deng (2), F. Manthey (2), S. Simsek (2); (1) North Dakota State University, Fargo, ND, U.S.A.; (2) NDSU Department of Plant Science, Fargo, ND, U.S.A.

Modelling

Scientific Initiative: Food Safety & Regulatory

- 145-P Application and validation of a statistically derived risk-based sampling plan.**
K. M. LEE (1), T. J. Herrman (2); (1) Texas A&M AgriLife Research, College Station, TX, U.S.A.; (2) Texas A&M University, College Station, TX, U.S.A.
- 146-P Development of sustainable management system for a gluten-free commercial bakery.**
V. STOJCESKA (1), C. Barnard (2), S. Tassou (2); (1) Brunel University, Uxbridge, Middlesex, AB, United Kingdom; (2) Brunel University, Uxbridge, United Kingdom

New Approaches for Production of Grain-Based Foods

Scientific Initiative: Ingredients & Innovations

- 147-P Physicochemical properties of pyrodextrins prepared with acetic acid at different temperatures.**
J. H. Lin (1), W. T. Kao (2), H. M. Zeng (2), Y. H. CHANG (3); (1) Department of Hospitality Management, MingDao University, Changhua, Taiwan; (2) Department of Food and Nutrition, Providence University, Taichung, Taiwan; (3) Providence University, Shalu, Taichung, Taiwan
- 148-P Assessment of cassava fiber and hydrocolloids for their application in wheat bread.**
E. RODRIGUEZ-SANDOVAL (1), L. Y. Polania-Gaviaria (1), M. Cortes-Rodriguez (1); (1) Universidad Nacional de Colombia, Medellin, Colombia
- 149-P Yeast performance in whole-wheat bread system.**
K. H. KHALID (1), S. Simsek (2); (1) North Dakota State University, Fargo, ND, U.S.A.; (2) NDSU Department of Plant Science, Fargo, ND, U.S.A.
- 150-P A multidisciplinary approach to define the molecular requirements for production of enriched pasta from pigmented wheat.**
F. BONOMI (1), M. Zanoletti (1), P. Abbasi Parizad (1), M. Marengo (2), V. Lavelli (1), A. Carpen (1), S. Iametti (1), M. A. Pagani (1); (1) University of Milan, Milan, Italy; (2) University of Milan, Milan, Italy
- 151-P WITHDRAWN**
- 152-P Influence of infrared cooking technology of pulses on the end product quality of spaghetti.**
G. BOUX (1); (1) Canadian International Grains Institute, Winnipeg, MB, Canada
- 153-P Corn starch modification with CGTase at sub-gelatinization temperature.**
A. Dura (1), C. M. ROSELL (2); (1) Institute of Agrochemistry and Food Technology (IATA - CSIC), Paterna (Valencia), Spain; (2) Institute of Agrochemistry and Food Technology (IATA - CSIC), Paterna, Valencia, Spain
- 154-P Sugar replacement in high-ratio white layer cakes.**
O. DANN (1), R. Miller (1), M. Angermayer (1), A. Oakley (2); (1) Kansas State University, Manhattan, KS, U.S.A.; (2) University of Illinois, Urbana-Champaign, IL, U.S.A.
- 155-P Effect of hard wheat and soft wheat flour blends on steamed bread quality.**
C. Ong (1), W. Wang (1), G. G. HOU (1), A. Bettge (2); (1) Wheat Marketing Center, Portland, OR, U.S.A.; (2) ADB Wheat, Moscow, ID, U.S.A.
- 156-P Comparison on the properties of wheat starch and resistant starch.**
J. WANG (1), H. J. Huang (2); (1) College of Light Industry and Food Sciences, guangzhou, China; (2) College of Biological Engineering, Henan University of Technology, Zhengzhou, China

continued

- 157-P Low gluten composite wheat bread: sensory evaluation and acceptability by Jamaican consumers.**
I. L. THOMPSON (1); (1) University of the West Indies, Kingston 7, Jamaica
- 158-P Sensory evaluation of a new proso millet product.**
E. Sanderson (1), M. MCSWEENEY (2); (1) School of Nutrition and Dietetics, Wolfville, NS, Canada; (2) Acadia University, Wolfville, ON, Canada

New Approaches in Rice and Bean Processing

Scientific Initiative: Engineering & Processing

- 159-P Compositional analysis of wet-milled fractions of dry edible beans.**
F. SUMARGO (1), H. Wang (1), D. J. Rose (1); (1) Univ of Nebraska, Lincoln, NE, U.S.A.
- 160-P Temperature- and moisture content-dependent discoloration patterns of milled rice during long-term rough rice storage.**
K. HAYDON (1), T. J. Siebenmorgen (1); (1) University of Arkansas, Fayetteville, AR, U.S.A.
- 161-P WITHDRAWN**
- 162-P Kernel dimensions affect the optimum conditions required in parboiling rice.**
J. PATINDOL (1), J. Assirati (2), A. Alvaranega (2), R. Amorim (2), Y. J. Wang (2); (1) Univ of Arkansas, Fayetteville, AR, U.S.A.; (2) University of Arkansas, Fayetteville, AR, U.S.A.
- 163-P Effect of genotype and environment on the physico-chemical properties of air classified faba bean protein concentrates.**
M. F. MARTINEZ (1), A. k. Stone (2), A. Vandenberg (2), M. T. Nickerson (2); (1) University of Saskatchewan, Saskatoon, SK, Canada; (2) University of Saskatchewan, Saskatoon, SK, Canada
- 164-P Impacts of parboiling conditions on the quality characteristics of parboiled comingled rice.**
K. Leethanapanich (1), J. PATINDOL (2), Y. J. Wang (1); (1) University of Arkansas, Fayetteville, AR, U.S.A.; (2) Univ of Arkansas, Fayetteville, AR, U.S.A.
- 165-P Effects of different processing on selected "beany" volatiles from soybean flour by simultaneous distillation extraction.**
Y. CHEN (1), S. Arntfield (2), M. Aliani (3); (1) University of Manitoba, WINNIPEG, MB, Canada; (2) University of Manitoba, Winnipeg, MB, Canada; (3) University of Manitoba, winnipeg, MB, Canada
- 166-P Effects of heat treatment on oil-binding ability of rice flour.**
M. SEGUCHI (1), A. Tabara (2); (1) Kobe Women's Univ, Suma-Ku Kobe, Japan; (2) Kobe Women's University, Kobe, Japan
- 167-P Physical and functional characteristics of broken rice kernels created by rapid moisture adsorption.**
S. MUKHOPADHYAY (1), T. J. Siebenmorgen (1); (1) University of Arkansas, Fayetteville, AR, U.S.A.
- 168-P Pigmented heirloom beans: quality characteristics before and after cooking.**
L. GARRETSON (1), T. Michaels (1), A. Marti (2); (1) University of Minnesota, St. Paul, MN, U.S.A.; (2) University of Milan, Milano, Italy
- 169-P Effect of drying-air conditions on head rice yield and moisture content of rice.**
S. MUKHOPADHYAY (1), T. J. Siebenmorgen (1); (1) University of Arkansas, Fayetteville, AR, U.S.A.
- 170-P Preparation and characterization of resistant starch from early Indica-rice by centrifugation.**
J. FENG (1), J. Huang (1), L. Wang (1), X. Su (1), Y. Hou (1); (1) College of Biological Engineering, Henan University of Technology, Zhengzhou, China

Non-Food Uses of Grains

Scientific Initiatives: Biotechnology & Sustainability, Engineering & Processing

- 171-P Development and application of starch-based biodegradable materials.**
L. YU (1), S. Khalid (2), L. Meng (2), X. Xiao (2), H. Liu (2), L. Chen (2); (1) School of Food and Light Industry, South China University of Technology, Guangzhou, China; (2) School of Food and Light Industry, South China University of Technology, Guangzhou, Guangdong, China
- 172-P Biomaterials production utilizing plant-crafted starches.**
D. SAGNELLI (1), K. Hebelstrup (2), V. Giosafatto (3), J. Kirkensgaard (4), D. Lourdin (5), K. Mortensen (4), A. Blennow (1); (1) University of Copenhagen, Frederiksberg, Denmark; (2) University of Aarhus, Aarhus, Denmark; (3) University of Naples, Naples, Italy; (4) University of Copenhagen, Copenhagen, Denmark; (5) Institut National De La Recherche Agronomique, Nantes, France
- 173-P Techno-economic analysis of ethanol production from temperate x tropical maize.**
H. HUANG (1), M. H. Chen (1), F. Below (1), L. Gentry (1), V. Singh (1); (1) University of Illinois at Urbana Champaign, Urbana, IL, U.S.A.
- 174-P Improving recovery of corn distillers oil from corn bioethanol process by enzyme addition: a model study.**
L. FANG (1), T. Wang (1), B. Lamsal (1); (1) Iowa State University, Ames, IA, U.S.A.
- 175-P Application of cellulose and lignin-coated cellulose based nanofillers for bio-based packaging.**
J. XU (1), P. H. Manepalli (1), L. Zhu (1), S. Alavi (1); (1) Kansas State University, Manhattan, KS, U.S.A.
- 176-P Corn starch film properties as affected by plasticizers and amylose contents.**
H. Y. KIM (1), J. I. Jane (2), B. Lamsal (2); (1) Iowa State University, Ames, IA, U.S.A.; (2) Iowa State University, Ames, IA, U.S.A.
- 177-P Development of a mass balance model of a dry grind ethanol plant.**
C. K. NELSON (1), C. R. Hurburgh (1); (1) Iowa State University, Ames, IA, U.S.A.

Physical Chemistry of Foods

Scientific Initiative: Chemistry & Interactions

- 178-P Flow behavior of corn starch suspensions as a function of concentration and temperature.**
N. Y. SINAKI (1); (1) University of Manitoba, Winnipeg, MB, Canada
- 179-P Preparation of starch nanoparticles by acid hydrolysis and bath-type ultra-sonicator.**
H. NAMKUNG (1), H. Y. Kim (2), S. T. Lim (1); (1) Graduate School of Life Sciences and Biotechnology, Korea University, Seoul, South Korea; (2) Department of Food science & Human nutrition, Iowa state university, Ames, IA 50011, USA, Ames, IA, U.S.A.
- 180-P Impact of polymer physicochemical features on the physical stability of citric acid amorphous solid dispersions.**
S. ARIOGLU TUNCIL (1), L. J. Mauer (2); (1) Purdue University, west lafayette, IN, U.S.A.; (2) Purdue University, West Lafayette, IN, U.S.A.
- 181-P Effect of particle size on shear flow properties of wheat flour.**
K. SILIVERU (1), K. Ambrose (2); (1) Kansas state university, Manhattan, KS, U.S.A.; (2) Kansas State University, Manhatta, KS, U.S.A.
- 182-P Influence of oat and barley beta-glucans on emulsification and lipolysis of canola oil.**
H. ZHAI (1), P. Gunness (1), M. J. Gidley (2); (1) ARC Centre of Excellence in Plant Cell Walls; Centre for Nutrition and Food Sciences, Queensland Alliance for Agriculture and Food Innovation; The University of Queensland, Brisbane, QLD, Australia; (2) ARC Centre of Excellence in Plant Cell Walls; Centre for Nutrition and Food Sciences, Queensland Alliance for Agriculture and Food Innovation; The University of Queensland, Brisbane, Australia
- 183-P Effect of cultivar and growing location on physicochemical and cooking quality traits of beans.**
N. WANG (1), A. Hou (2), J. Santos (3); (1) Canadian Grain Commission, Winnipeg, MB, Canada; (2) AAFC Morden Research Station, Morden, MB, Canada; (3) Canadian Grain Commission, Winnipeg, MB, Canada

- 184-P Preparation and characterization of aqueous starch-based alpha lipoic acid composite dispersion.**
Y. LI (1), S. LIM (1); (1) Graduate School of Life Sciences and Biotechnology, Korea University, Seoul, South Korea
- 185-P The effects of native wheat lipids on the visco-elastic properties of dough.**
S. CROPPER (1), H. Dogan (1), J. Faubion (1); (1) Kansas State University, Manhattan, KS, U.S.A.
- 186-P *WITHDRAWN*
- 187-P Changing the molecular structure of milk proteins results in texture and structural differences in finished baked goods.**
L. WARD (1), D. Hoffpauer (2), J. Nutsch (1), V. Zhong (1), J. Swindler (1); (1) Glanbia Nutritionals, Twin Falls, ID, U.S.A.; (2) Glanbia Nutritionals, Twin Falls, ID, U.S.A.
- 188-P Pasting and textural properties of sorghum flours before and after germination.**
C. YI (1), Y. Li (1), Y. He (2); (1) Changsha University of Science and Technology, Changsha, HI, China; (2) James Cook University, Townsville, QC, Australia
- 189-P Solvent retention capacity on milling fractions of hard red spring wheat flour.**
A. LINDGREN (1), S. Simsek (2); (1) NDSU Department of Plant Science, Fargo, ND, U.S.A.; (2) North Dakota State University, Fargo, ND, U.S.A.
- 190-P Preparation of waxy maize starch nanoparticles using enzymatic hydrolysis and recrystallization.**
D. J. LEE (1), S. T. Lim (1); (1) Graduate School of Life Sciences and Biotechnology, Seoul, Korea
- 191-P Preparation and properties of starch nanoparticles in a water in oil microemulsion system.**
Z. LUO (1), X. Wang (2); (1) South China Univ of Technology, Guangzhou, China; (2) South china university of technology, guangzhou, China
- 192-P *WITHDRAWN*
- 199-P Assessment of corn quality for nixtamalization: development of a bench-top cooking method.**
S. N. SAHASRABUDHE (1), W. S. Ratnayake (2), J. M. Mathew (3), D. S. Jackson (4); (1) University of Nebraska-Lincoln, Lincoln, NE, U.S.A.; (2) Ingredient, Bridgewater, NJ, U.S.A.; (3) Frito Lay/Pepsico, Plano, TX, U.S.A.; (4) University of Nebraska, Lincoln, NE, U.S.A.
- 200-P *WITHDRAWN*

Starch Structure and Analysis

Scientific Initiative: Chemistry & Interactions

Physicochemical Properties of Grains

Scientific Initiative: Engineering & Processing

- 193-P Hydrothermal treatment of "Morado" banana starch: physicochemical and digestibility features.**
L. A. BELLO-PEREZ (1), J. D. Hoyos-Leyva (1); (1) CEPROBI-IPN, Yauatepec, Morelos, Mexico
- 194-P Cooking quality of extruded and laminated noodles.**
S. MOAYEDI (1), F. Manthey (2), Y. Li (1); (1) North Dakota State University, Fargo, ND, U.S.A.; (2) North Dakota State Univ, Fargo, ND, U.S.A.
- 195-P Preparation of starch nanospheres through hydrophobic modification followed by initial water.**
F. Gu (1), B. Z. Li (2), H. Xia (3), B. Adhikari (4), Q. GAO (5); (1) South China Univ of Technology, Guangzhou, China; (2) Guangxi Key Laboratory of Biorefinery, Guangxi Academy of Sciences, Nanning, China; (3) South China University of Technology, Guangzhou, China; (4) RMIT University, Melbourne, VIC, Australia; (5) South China University of China, Guangzhou, China
- 196-P Improvement of resistant starch and cooking stability of debranched cassava starch by hydrothermal treatments.**
S. Boonna (1), S. TONGTA (2); (1) Suranaree University of Technology, Nakhon Ratchasima, Thailand; (2) Suranaree University of Technology, Nakhon Ratchasima, Thailand
- 197-P Optimisation and effects of forced convection roasting on physicochemical and antioxidants properties of Nigerian maize.**
S. M. BALA (1), L. U. Opara (2), M. Kidd (2), M. Manley (2); (1) Stellenbosch University, Stellenbosch, South Africa; (2) Stellenbosch University, Stellenbosch, South Africa
- 198-P New insights into processing conditions for formation of soft, food-based, nanoparticle delivery systems.**
A. STEEN (1), O. H. Campanella (1), B. R. Hamaker (2); (1) Purdue University, West Lafayette, IN, U.S.A.; (2) Whistler Center for Carbohydrate Research and Department of Food Science, Purdue University, West Lafayette, IN, U.S.A.
- 201-P Physicochemical and structural characteristics of starch isolated from banana cultivars.**
E. AGAMA-ACEVEDO (1), M. C. Nuñez-Santiago (2), G. Pacheco-Vargas (2); (1) CEPROBI-IPN, Yauatepec, Morelos, Mexico; (2) CEPROBI-IPN, Yauatepec, Mexico
- 202-P The short-term structure of gelatinized waxy starch dispersions.**
F. FANG (1), O. Campanella (1), B. Hamaker (1); (1) Purdue University, West Lafayette, IN, U.S.A.
- 203-P Physicochemical characteristics and digestibility on bean starches harvested in the Huasteca Potosina.**
V. ESPINOSA-SOLIS (1), L. A. Bello-Perez (2), M. L. Carrillo-Inugaray (3), A. Gomez-Esparza (3), C. d. P. Suarez-Rodriguez (1); (1) Coordinación Académica Región Huasteca Sur/ Universidad Autónoma de San Luis Potosí, Tamazunchale, Mexico; (2) CEPROBI-IPN, Yauatepec, Morelos, Mexico; (3) Unidad Académica Multidisciplinaria Zona Huasteca/Universidad Autónoma de San Luis Potosí, Ciudad Valles, Mexico
- 204-P *WITHDRAWN*
- 205-P *WITHDRAWN*
- 206-P *WITHDRAWN*
- 207-P Effect of calcium salts on thermal and pasting properties of maize starch during ecological nixtamalization process.**
D. SANTIAGO-RAMOS (1), J. d. Figueroa Cardenas (2), J. J. Véles-Medina (3), R. Reynoso-Camacho (4), M. Ramos-Gómez (1), M. Gaytán-Martínez (4), E. Morales-Sánchez (5); (1) Universidad Autónoma de Querétaro, Querétaro, Mexico; (2) CINVESTAV Unidad Querétaro, Querétaro, Qro, Mexico; (3) Cinvestav- Unidad Querétaro, Querétaro, Mexico; (4) Universidad Autónoma de Querétaro, Querétaro, Mexico; (5) CICATA-Querétaro, Querétaro, Mexico
- 208-P *WITHDRAWN*
- 209-P Does diurnal photosynthetic activity influence the structure of barley starch?**
A. GOLDSTEIN (1), G. A. Annor (2), K. Hebelstrup (3), J. Kirkensgaard (4), K. Mortensen (4), A. Blennow (4), E. Bertoft (1); (1) University of Minnesota, St. Paul, MN, U.S.A.; (2) University of Ghana, Accra, Ghana; (3) Aarhus University, Aarhus, Denmark; (4) University of Copenhagen, Copenhagen, Denmark
- 210-P Crystallization behaviour of debranched rice starches monitored by time-resolved synchrotron wide-angle x-ray scattering.**
W. KIATPONGLARP (1), S. Rugmai (2), A. Buléon (3), S. Tongta (1); (1) Suranaree University of Technology, Nakhon Ratchasima, Thailand; (2) Synchrotron Light Research Institute (Public organization), Nakhon Ratchasima, Thailand; (3) Institut National de la Recherche Agronomique, Nantes, France
- 211-P Dosage effects of waxy gene on starch structures and properties of maize.**
H. YANGCHENG (1), J. L. Jane (1); (1) Iowa State University, Ames, IA, U.S.A.

Structured Foods

Scientific Initiative: Chemistry & Interactions

- 212-P Influence of oxidative gelation capacity of unchlorinated flour on pancake and Japanese sponge cake quality.**
C. FAJARDO (1); (1) Oregon State University, Corvallis, OR, U.S.A.
- 213-P Changes in corn protein matrix during postharvest storage.**
D. RAMCHANDRAN (1), M. P. Hojilla-Evangelista (2), K. D. Rausch (1), M. Tumbleson (1), V. Singh (1); (1) University of Illinois, Urbana Champaign, Urbana, IL, U.S.A.; (2) National Center of Agricultural Utilization Research, USDA, Peoria, IL, U.S.A.

continued

- 214-P Protein structural features in winter wheat: benchmarking diversity in Ontario hard and soft winter wheat.**
W. CAO (1), J. E. Bock (1); (1) University of Guelph, Guelph, ON, Canada
- 215-P New insights to the properties of N-terminal domain of high molecular weight glutenin subunit.**
J. J. Wang (1), G. Y. Liu (1), L. Li (1), Y. Hou (1), S. Q. HU (1); (1) South China University of Technology, Guangzhou, China
- 216-P Gluten degradation on wheat flour with prolyl-endopeptidase to prepare a gluten-reduced bread.**
N. HEREDIA-SANDOVAL (1), A. Calderón de la Barca (1), A. Islas-Rubio (1); (1) Centro de Investigación en Alimentación y Desarrollo, A.C., Hermosillo, Sonora, Mexico
- 217-P Changes in chemical composition of white and whole wheat breads after baking.**
K. WHITNEY (1), S. Simsek (2); (1) North Dakota State Univ, Fargo, ND, U.S.A.; (2) North Dakota State University, Fargo, ND, U.S.A.
- 218-P Effects of botanical source and enzymatic modifications on starch-stearic acid complex formation.**
E. O. Arijaje (1), Y. J. Wang (1), E. LII (1). (1) University of Arkansas, Fayetteville, AR, U.S.A.
- 219-P Isolation and identification of alpha-xylopyranosyl-(1→3)-arabinose as an oligomeric side chain from maize arabinoxylans.**
R. R. SCHENDEL (1), I. Sackmann (1), M. Bunzel (1); (1) Karlsruhe Institute of Technology, Karlsruhe, Germany
- 220-P Influence of growing conditions and protein content on wheat kernel texture.**
P. C. WILLIAMS (1); (1) PDK Projects Inc, Nanaimo, BC, Canada
- 227-P Carotenoid profiles of local landrace corn grown in central Malawi.**
T. Hwang (1), Y. SONG (1), V. Ndolo (1), M. Katundu (2), B. Nyirenda (2), R. Bezner-Kerr (3), S. Arntfield (4), T. Beta (5); (1) University of Manitoba, Winnipeg, MB, Canada; (2) University of Malawi, Chancellor College, Zomba, Malawi; (3) Cornell University, Ithaca, NY, U.S.A.; (4) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada; (5) Univ of Manitoba, Winnipeg, MB, Canada
- 228-P Comparison of phytochemicals and antioxidant capacity in three bean varieties grown in central Malawi.**
G. FAN (1), V. Ndolo (1), M. Katundu (2), R. Bezner-Kerr (3), S. Arntfield (4), T. Beta (5); (1) University of Manitoba, Winnipeg, MB, Canada; (2) University of Malawi, Chancellor College, Zomba, Malawi; (3) Cornell University, Ithaca, NY, U.S.A.; (4) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada; (5) Univ of Manitoba, Winnipeg, MB, Canada
- 229-P Health benefits of resistant dextrins.**
J. HASJIM (1); (1) Roquette, Shanghai, China
- 230-P WITHDRAWN**
- 231-P The effects of maize feruloylated oligo- and polysaccharides on metabolic disorders and gut microbiota composition.**
J. Yang (1), L. Bindels (2), R. Segura (1), I. Martínez (3), J. Walter (3), A. Ramer-Tait (1), D. ROSE (4); (1) University of Nebraska-Lincoln, Lincoln, NE, U.S.A.; (2) Université catholique de Louvain, Louvain-la-Neuve, Belgium; (3) University of Alberta, Edmonton, Canada; (4) Univ of Nebraska, Lincoln, NE, U.S.A.
- 232-P Whole grains consumption in Mexican restaurants in the Twin Cities.**
X. LIU (1), H. Thornburgh (2), L. Marquart (2); (1) University of Minnesota, Falcon Heights, MN, U.S.A.; (2) University of Minnesota, St. Paul, MN, U.S.A.
- 233-P Seemingly subtle structural features in corn arabinoxylan fractions induce a lag phase shift of *B. xylanisolvens* XB1A.**
X. NIE (1), B. L. Reuhs (1), E. C. Martens (2), B. R. Hamaker (1); (1) Purdue University, West Lafayette, IN, U.S.A.; (2) University of Michigan, Medical School, Ann Arbor, MI, U.S.A.
- 234-P Robust butyrogenic effect of a mixture of fibers in *in vitro* fermentation.**
T. CHEN (1), A. Keshavarzian (2), B. R. Hamaker (3); (1) Purdue Univ, West Lafayette, IN, U.S.A.; (2) Division of Digestive Diseases Rush University Medical Center, Chicago, IL, U.S.A.; (3) Whistler Center for Carbohydrate Research and Department of Food Science, Purdue University, West Lafayette, IN, U.S.A.
- 235-P Antioxidant capacity of quinoa phenolics following *in vitro* gastrointestinal digestion (*Chenopodium quinoa*).**
G. BALAKRISHNAN (1); (1) University of Florida, Gainesville, FL, U.S.A.
- 236-P Flavonoids and saponins from black bean incorporated into whole bread and for colon cancer preventing.**
R. A. CHAVEZ-SANTOSCOY (1), M. Lazo-Velez (2), J. Gutierrez-Urbe (3), S. Serna-Saldivar (2); (1) UABC, Tijuana, CA, Mexico; (2) ITESM, Monterrey, AB, Mexico; (3) ITESM, Monterrey, AK, Mexico

Whole Grains, Dietary Fiber, and Phenolics

Scientific Initiative: Health & Nutrition

- 221-P Phenolic compounds and antioxidant capacity of glucoarabinoxylans extracted from three types of sorghum brans.**
F. E. AYALA-SOTO (1), S. O. Serna-Saldivar (2), J. Welti-Chanes (2), J. A. Gutiérrez-Urbe (2); (1) Tecnológico de Monterrey, Monterrey, Mexico; (2) Tecnológico de Monterrey, Monterrey, Mexico
- 222-P Thinking critically about whole grains: a commentary on ingredient and food-based definitions.**
R. KORCZAK (1), L. Marquart (1), J. L. Slavin (2), Y. Chu (3); (1) University of Minnesota, Saint Paul, MN, U.S.A.; (2) University of Minnesota, Saint Paul, MN, U.S.A.; (3) PepsiCo, Barrington, IL, U.S.A.
- 223-P Health promoting potential of high amylose wheat.**
A. REGINA (1), P. Berbezy (2), S. Chapron (2), A. Bird (3); (1) CSIRO, Canberra, Australia; (2) Limagrain Cereales Ingredients, Clermont Ferrand, France; (3) CSIRO, Adelaide, Australia
- 224-P Unusual fermentation property of low gas production found in microwave solubilized quinoa fiber.**
L. Lamothe (1), X. ZHANG (1), T. Chen (1), B. Hamaker (1); (1) Whistler Center for Carbohydrate Research and Department of Food Science, Purdue University, West Lafayette, IN, U.S.A.
- 225-P Evaluation of the *in vitro* antioxidant properties of corn germ protein hydrolysate and peptide fractions.**
W. WANG (1), J. Huang (1), M. Yang (1), J. Feng (1), Y. Hou (1), X. Su (1), G. Xiong (2); (1) College of Biological Engineering, Henan University of Technology, Zhengzhou, China; (2) Laohekou Chang Xiang oil co., LTD, Laohekou, China
- 226-P Mechanisms for synergistic interaction of sorghum & black-eyed pea flavonoid mixtures in Caco-2 cell model.**
S. AGAH (1), H. Kim (1), S. Talcott (1), J. Awika (1); (1) Texas A&M University, College Station, TX, U.S.A.

Our Science, Our Future

Julie Miller Jozes, 1999 AACCI President

“Cereals will play a front-and-center role in feeding the 9 billion in 2050. AACCI should have a key role in meeting issues facing the developed and developing world. It will require global thinking and the realization that while the needs are global, solutions may be local.”

Thank You

AACC International Corporate Members

Thank you to our corporate members, who contribute their knowledge, expertise, and professional involvement to AACCI. Corporate member support keeps AACCI's industry relationships strong and helps elevate cereal grain science throughout the world. Contact information for all of our AACCI Corporate members is available on the AACCI website.

ADM Milling Co.	Florida Food Products, Inc.	Nutrimix Flour Mills
ADM/Matsutani LLC	FONA International	Oatly AB
AgriFood Technology	Foss Analytical AB	OMIC USA Inc
Agtron	FOSS North America Inc.	P&H Milling Group Limited
AIB International	FSFI Centre for Grain Quality Assurance	Palsgaard Incorporated
ANKOM Technology	General Mills	Panzani-Crecrepal
Ardent Mills	George Weston Foods	Penford Food Ingredients
Atyab Foodtech Trading & Services LLC	Glanbia Nutritionals	Perten Instruments
Baker Perkins	GNT USA Inc	Perten Instruments AB
Bay State Milling Company	Gold Coast Ingredients, Inc.	Polypro Intl Inc
Bell Flavors & Fragrances	Grain Millers, Inc.	Productos Ramo S.A.
BENEO	Grain Processing Corporation	Qualibet Testing Services Corporation
BENEO GmbH	Grains & Legumes Nutrition Council	QualySense AG
Bepex International LLC	Granotec Grupo	R-Biopharm Inc.
Best Cooking Pulses Inc.	Great Plains Analytical Laboratory	Radio Frequency Co. Inc.
Brabender GmbH & Co. KG	Hans-Dieter-Belitz-Institute for Cereal Grain Research	Red Star Yeast Co. LLC
Briess Malt & Ingredients Co.	Haubelt Laborgerate GmbH	Research Products Company
Brolite Products Inc.	Hesco, Inc.	Richardson Milling
Brookfield Engineering Laboratories USA	Hunter, Walton & Co., Inc.	Riviana Foods Inc.
Budenheim USA Inc	ICL Food Specialties	Romer Labs Inc.
Buhler	ILC Micro-Chem	Seaboard Overseas Trading Group
Butter Buds Food Ingredients	InfraReady Products (1998) Ltd.	Semo Milling, LLC
C.W. Brabender® Instruments, Inc.	Innophos, Inc.	Sensus America, Inc.
Calibre Control International Ltd.	Inspectorate America Corp	Shur-Gain Nutreco Canada
California Natural Products	IOI Loders Croklaan	Stable Micro Systems Ltd.
Campden BRI	J. Rettenmaier USA LP	SunOpta, Inc.
Canadian Grain Commission	Kellogg Co.	Suzanne's Specialties
Canadian International Grains Institute	Kudos Blends Ltd	Symrise Inc.
Caremoli USA Inc	Lallemand Baking Solutions	Syral SAS
Cargill	Malt Products Corp.	Takenouchi Barley Processing Inc.
Cereal Food Processors Inc.	MANE, Inc.	Texture Technologies Corp.
Cereal Ingredients	McCormick & Co., Inc.	The Hershey Co.
Cereal Science and Technology-SA	Mennel Milling Co., The	The Southern African Grain Laboratory NPC
CHOPIN Technologies	Merieux NutriSciences	The XIM Group LLC
Corbion	MGP Ingredients, Inc.	TIC Gums Inc.
Corpus Christi Grain Exchange	Miller Milling Company	Tree Top Inc
Cotecna Inspection Inc.	Minot Milling	United Flour Mill Co Ltd
CPM Wolverine Proctor	Monsanto Co.	US Energy Partners LLC
Dakota Specialty Milling, Inc.	Morton Salt Inc.	USDA-GIPSA Technology & Science Division
David Michael & Co.	National Manufacturing Co.	Wenger Manufacturing Inc
Deibel Laboratories	Nestle PTC Orbe	Yucebas Machinery Analytical Equipment Industry
Delavau	Nestle R&D	
DSM Food Specialties USA, Inc.	Nexira	
DuPont Nutrition & Health	Northern Crops Institute	
Enzyme Development Corp.	NP Analytical Laboratories	
Five Star Flour Mills Co.		

2015 AACC INTERNATIONAL AWARDEES

Congratulations to the following members selected to receive AACC International's most prestigious awards in honor of their significant contributions to the field of cereal grain science. Please join us per the schedule below at this Centennial Meeting to celebrate their accomplishments.

Awards being Presented at the Opening General Session

Monday, October 19

8:30-10:00 a.m. Grand Ballroom A-D, HILTON

Alsberg-French-Schoch Memorial Lectureship Award

This lectureship was established in 1965 to honor chemists who have made distinguished contributions to fundamental starch science. Established by the Corn Refiners with a grant to AACCI for its administration, the award is given every two to four years and includes a \$2,000 honorarium, a plaque, and the opportunity to present a lecture on some phase of starch science before an annual meeting of the association.



Kwan Hwa Park is a professor emeritus at Seoul National University in Seoul, Korea, where he has taught for the last 33 years and served as director at the Research Center for New Biomaterials in Agriculture. Park has also served as a member of the Governing Council of the International Union of Food Science and Technology (IUFoST). His research activities include studies on the mechanism and application

of various amylases and glucosyl transferases. He has edited two books on carbohydrate-active enzymes and published more than 270 peer-reviewed papers. Currently, he is employed as a visiting professor at the Institute of Food Science and Technology in Fuzhou University, China.

Dr. Park's award lecture, "The role of carbohydrate-active enzymes in glycogen and starch metabolism," will take place on Tuesday, October 20 at 10:30 a.m. during the Enzymes to Improve Cereal Quality technical session.

Nominate Your Colleague for 2016 AACCI Awards

The call is now being made for 2016 AACCI award nominations to be presented at the 2016 AACCI Annual Meeting. Nominations must be submitted on or before January 31, 2016, using the online nomination form at www.aaccnet.org/membership/awards/_layouts/AACCforms/AwardNomination.aspx

A full list of award descriptions, previous award winners, and criteria are found online aaccnet.org/membership/awards.

Thomas Burr Osborne Medal

The prestigious Osborne Medal, established in 1926 to recognize distinguished contributions in the field of cereal chemistry, was named after the outstanding protein chemist Thomas Burr Osborne who received the first award in 1928. The award consists of an honorarium of \$2,000 and a suitably inscribed medal in the form of a plaque. The recipient shall speak at the AACCI Annual Meeting at which the medal is presented. Recipients of the Osborne Medal are also accorded the status of AACCI Fellow. This medal shall be awarded to an individual whose research in the field of cereal chemistry has contributed significantly to the progress of the science.



Per B.J. Åman is professor emeritus of plant product science in the Department of Food Science, Swedish University of Agricultural Sciences, Uppsala. He was deputy head of the department (1996–2002) and head of the Division of Food Chemistry and Plant Product Science until 2013. He has developed methods for the analyses of dietary fiber components and starch. He has elucidated the structure and properties

of different cereal polysaccharides and studied nutritional effects of cell wall-degrading enzymes. He has investigated the health effects of cereal carbohydrates and developed biomarkers for whole grain wheat and rye intake (alkylresorcinols). He has supervised 30 Ph.D. students and published approximately 400 scientific papers.

Dr. Åman's award lecture, "40 years of dietary fiber research," will take place on Tuesday, October 20 at 10:30 a.m. during the Cereal Dietary Fiber Properties and Fermentation technical session.

AACC International Fellows

The AACC International Board of Directors established a Fellows Program in 1985 to honor association members who have made distinguished contributions to the field of cereal science and technology in research, industrial achievement, leadership, education, administration, communication, or regulatory affairs. Anyone who has been a member for at least 10 years and made such a contribution is eligible.



Jonathan W. DeVries, is a retired senior technical manager of Medallion Laboratories of General Mills Inc. He was active in quality-related analytical work for more than 47 years, primarily in nutrition and food safety. He worked for the international standardization of analytical methods through AACCI. DeVries has been active in the AACCI vitamins and dietary fiber technical committees and was the annual meeting program chair

for 2008. He received the Edith A. Christensen Award of AACCI and the Harvey W. Wiley Award of AOACI in 2009. DeVries has authored or coauthored more than 80 publications. He has a Ph.D. degree in organic chemistry from the University of Minnesota. DeVries was recently elected chair of the Food Ingredients Expert Committee–Food Chemicals Codex.



Peter Koehler obtained his Ph.D. degree in 1992 from Technische Universität München, Germany, on disulfide bonds of wheat gluten. Currently, he is vice director of the German Research Center for Food Chemistry in Freising, Germany. Koehler is leading a group working on the structure–function relationships of cereal biopolymers. He is conducting studies on celiac disease and on the structure and functional properties of wheat gluten and

other cereal proteins, as well as on enzymes and emulsifiers in bread making. He has published more than 100 scientific papers and is teaching food chemistry at Technische Universität München.

William F. Geddes Memorial Award

The William F. Geddes Memorial Award was created in 1961 to honor the zeal and unselfish industry of an individual member and emphasize the importance of his or her contributions to the work of the association. Geddes served the association long and unselfishly as president (1938–1939), vice president (1937–1938), editor-in-chief of Cereal Chemistry (1943–1961), active member, and committee member. Over the long span of his association with AACC International, Geddes influenced the organization in many ways, contributing to its work and progress, increasing its usefulness to its members, and boosting its reputation in the fields of fundamental and applied cereal science.

2015 Recipient: The name of the recipient is kept secret until unveiled during the ceremony.

Awards being Presented at the Plenary Session

Tuesday, October 20

8:30–10:00 a.m. Grand Ballroom A-D, HILTON

Excellence in Teaching Award

The Excellence in Teaching Award is presented to a member and teacher who have made significant contributions through teaching in the broad field of cereal science and technology.



Koushik Seetharaman (awarded posthumously) published more than 100 journal papers and 4 book chapters. He advised more than 35 graduate students, of which 10 received doctoral degrees. He obtained a Ph.D. degree from Texas A&M University. He held positions at universities in Iowa, Pennsylvania, Ontario (Canada), and Minnesota. His time at the University of Guelph (Ontario) became his most active and

intense time as a teacher and researcher. His research group grew to 40–45 people, from more than 15 countries and all continents. Seetharaman was also very active within the research community. He was the Carbohydrate Division chair for IFT and AACCI; scientific program chair and vice chair for the AACCI annual meetings; and one of the active founders of the AACCI Student Division. In addition, Seetharaman was involved in several international collaborative projects.

Young Scientist Research Award

The AACCI Young Scientist Research Award is presented to an individual for outstanding contributions in basic and applied research to cereal science with the expectation that contributions will continue. This award recognizes research relevant to the broad aims and interests of AACCI International. Awardees must not be older than 40 years by June 1 of the year the award is given. The recipient will receive a \$1,000 honorarium and a plaque and will be encouraged to present a lecture at the AACCI International meeting of the year in which the award is given.



Laura M. Nyström received her doctoral degree in food chemistry from the University of Helsinki, Finland. After working as a post-doctoral researcher in the group of Cereal Technology in the same university, she was appointed to her current position as tenure-track assistant professor of Food Biochemistry in ETH Zurich (Swiss Federal Institute of Technology, Zurich, Switzerland) in 2009. Current research of Nyström's

group focuses on dietary fibers in cereal grains and associated minor phytochemicals, radical-mediated degradation of polysaccharides, and enzymatic lipid modification. Nyström has published more than 40 original publications, 2 book chapters, and 2 patent applications.

Dr. Nyström's award lecture "Soluble grain fibres: Finding the optimal balance between nutritional and technological functionality," will take place on Wednesday, October 21 at 10:20 a.m. during the Grain Components and Gastrointestinal Health technical session.

Awards being Presented at the Closing Session

Wednesday, October 21

4:00–5:30p.m. Grand Ballroom A-D, HILTON

Edith Christensen Award for Outstanding Contributions in Analytical Methods

This award recognizes scientific and technical contributions that have advanced the grain science field. Recipients of the award have demonstrated excellence through their contributions to the development of new analytical technologies, the application of new analytical technologies to cereal grain products, and/or the application of existing analytical technologies to solving detection and measurement problems in the field of grain science. They have also demonstrated leadership in methods activity within AACCI.



Nancy Ames is a cereal research scientist with Agriculture and Agri-Food Canada. Her primary focus has been the study of oat, barley, and wheat and understanding the factors that affect nutritional value. Ames has contributed significantly in the area of food product development, holds several food product patents, has authored and coauthored more than 60 peer-reviewed publications, and obtained a therapeutic

health claim for barley and cholesterol lowering from Health Canada. Ames holds a B.Sc. degree in food science and an M.Sc. degree in plant science from the University of Manitoba and a Ph.D. degree in crop science from the University of Guelph.

Dr. Ames' award lecture, "Development of new methods to assess the nutritional aspects of cereal grain products," will take place on Wednesday, October 21 at 10:20 a.m. during the New Methods of Grain Components technical session.

Texture Technologies Quality Research Awards

This two-part award is presented to an author who either writes or presents high quality research that broadly involves instrumental texture analysis. The Paper Award will be awarded to an author from either Cereal Chemistry or CFW that was published over the past year. The Presentation Award will be awarded to an author who has presented a poster/paper at this year's AACCI Centennial Meeting. Submitted papers and posters are judged by the Texture Technologies Quality Research Award Committee.

Best Paper Award

Cereal Chem 91(4):406-413

Measurements and Comparison of Glass Transition and Sticky Point Temperatures of Distillers Dried Grains with Solubles (DDGS) with Varying Condensed Distillers Solubles (CDS) and Drying Temperature Levels Corresponding

Authors: Kurt A. Rosentrater, Rumela Bhadra, K. Muthukumarappan



Kurt A. Rosentrater is executive director and CEO of the Distillers Grains Technology Council, which is a nonprofit organization dedicated to education and outreach to improve the value and use of distillers grains, which are coproducts from beverage alcohol and fuel ethanol manufacturing. He is also an associate professor in the Department of Agricultural and Biosystems Engineering and the Department

of Food Science and Human Nutrition at Iowa State University. For almost two decades, he has actively pursued research to improve the use of grains and coproducts and has been developing a variety of new applications, including enhanced feeds, foods, biofuels, bioplastics, biocomposites, industrial intermediates, and ingredients.

Best Presentation Award

The recipient will be announced during the Closing Session after the review jury has attended all of the candidate presentations during the meeting and made their determination.

Other AACCI International awardees recognized at this Centennial Meeting

Cecil F. Pinney Travel Awardee

The AACCI Foundation Cecil F. Pinney Travel Award is presented to individuals establishing careers in grain science and technology. An emphasis on encouraging the involvement of the next generation of grain scientists is essential to AACCI's mission and growth.



Katharina Scherf is a research scientist at the Deutsche Forschungsanstalt für Lebensmittelchemie, Leibniz Institut (DFA) in the research group of Peter Koehler, in Freising, Germany. She works in the field of gluten analysis in products for celiac disease and wheat-intolerance. She is an active AACCI member and currently serves as vice chair on the Protein Division, vice chair on the AACCI Annual

Meeting Program Planning Team for Process Engineering & Chemistry Interactions, and is the co-chair of the Protein & Enzymes Technical Committee. She was the third place awardee of the 2012 AACCI Best Student Research Paper and the recipient of the 2013 Best Oral Paper Award at the Cereals in Europe Meeting.

Protein Division Walter Bushuk Graduate Research Award in Cereal Protein Chemistry

This award recognizes Ph.D. students who have made outstanding contributions in basic and/or applied research in cereal protein chemistry. This award recognizes research relevant to the broad aims of AACCI. The research can be either fundamental/basic or applied.

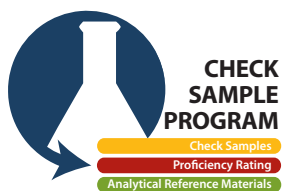


Marlies Lambrecht was born in 1989 in Wilrijk (Belgium). She obtained her master's degree in bioscience engineering in food technology at KU Leuven. Currently, she works as a doctoral student at the Laboratory of Food Chemistry and Biochemistry at KU Leuven and Leuven Food Science and Nutrition Research Centre (LFoRCe) with research interest in food proteins, their changes and interactions during

processing, and their role in food systems. She plans to finish her PhD thesis next year under supervision of Professor Jan Delcour.

Marlies Lambrecht's award lecture, "Cross-linking of gluten, globular proteins and mixtures thereof in aqueous ethanol and water" will take place on Wednesday, October 21 at 10:20 a.m. during the Functionality of Cereal Components technical session.

AACC International Analytical Accuracy Awardees for 2014 Announced



Awardees of AACC International's Analytical Accuracy awards, based on 2014 check sample results, have been announced. This is the 15th year of the AACC International Analytical Accuracy awards. Awardees receive a certificate suitable for

posting and are listed in the 2015 Nov-Dec issue of *CFW* and on the AACCI website.

All subscribers to the AACCI check sample program series that include a proficiency rating option are eligible. Subscription to the proficiency program is not required but highly recommended. To be eligible for an award, laboratories must have met all the requirements for results submission in the award year.

The award in each series is presented to the laboratory submitting the most accurate analyses (the accuracy score). The accuracy score is determined with the same statistical procedures used to evaluate the proficiency ratings. The required analyses in each check sample series are considered first. In addition, to encourage subscribers to include the results of optional analyses in their reports, these results are also included if they improve the accuracy score.

Formal entry for the award competition is not necessary—all check sample subscribers in a given check sample series are automatically entered if they have submitted the required results on all samples for the award year.

The accuracy award results relate to the performance of the awardee's analyst or laboratory and not that of other analysts and laboratories that may be equally qualified.

Check sample subscribers or others who would like more information about AACC International Check Sample and Proficiency Rating Service are invited to visit: aacnet.org/resources/checksample.

Our Science, Our Future

Bernard Bruinsma, 2007 AACCI President

"Recently, the world population crossed 7 billion persons. Many suggest that by the end of this century the population may grow by another 50% or greater than 11 billion. Grains will need to be the base of the diet to feed these numbers of persons. Given that arable land will not increase by that amount, dramatic yield increases must accompany the population increase.

AACCI may have fewer mill chemists (those who started this group) but more nutritionist, scientists and, genetic engineers who can build and modify grains to enhance yield, nutrients, and function.

I suspect that AACCI will have an even greater global presence as these issues need to be addressed on a global scale."

Check Sample A—Hard Wheat Flour, Monthly
Canadian Grain Commission, Winnipeg, MB, Canada

Check Sample B—Hard Wheat Flour, Bimonthly
Kerry Flour Mills Ltd, Samutprakarn, Thailand

Check Sample C—Soft Wheat Flour
Nisshin Flour Milling Inc, Tokyo, Japan

Check Sample D—Feed Analyses
FFM Berhad, Port Klang Selangor, Malaysia

Check Sample DF—Dietary Fiber
ConAgra, Omaha, NE, U.S.A.

Check Sample HL—Farinograph
AIB International, Manhattan, KS, U.S.A.

Check Sample HS – Farinograph
The Mennel Milling Co, Fostoria, OH, U.S.A.

Check Sample I—Amylograph
Bay State Milling Co, Winona, MN, U.S.A.

Check Sample J—Mixograph
Southern African Grain Laboratory, Pretoria, South Africa

Check Sample K—Fat and Fatty Acids
Covance Laboratories, Madison, WI, U.S.A.

Check Sample MBA—Microbiological Analyses (Including Pathogens)
Grain Processing Corp, Washington, IN, U.S.A.

Check Sample MBB—Microbiological Analyses
Nutri-Pea Limited, Portage Le Prairie, MB, Canada

Check Sample SA—HPLC Sugar Analysis
Customs & Border Protection, Chicago, IL, U.S.A.

Check Sample VMP—Vitamin Analyses
Eurofins Nutrition Analysis Center, Des Moines, IA, U.S.A.

Check Sample VMP—Mineral Analyses
Zagro Singapore Pte Ltd, Singapore, Singapore

Check Sample VMP—Proximate and Vitamin Analyses
Merieux NutriSciences, Markham, ON, Canada

Check Sample VMP—Proximate and Mineral Analyses
Merieux NutriSciences, Markham, ON, Canada

Check Sample VMP—Vitamins, Minerals, and Proximate Analyses
Merieux NutriSciences, Markham, ON, Canada

RELIABLE, TECHNICAL, CUSTOMER DRIVEN

At EDC - Enzymes Are Our Business™



Enzyme Development Corporation®

212.736.1580 ext 248 • info@enzymedevelopment.com
www.enzymedevelopment.com

2014–2015 AACC INTERNATIONAL BOARD OF DIRECTORS



President
Gerard Downey
TEAGASC
Ireland



Chair of the Board
Jan A. Delcour
Katholieke
Universiteit Leuven
Belgium



President-Elect
Lydia Tooker Midness
General Mills
U.S.A.



Treasurer
Dave L. Braun
The Mennel Milling Co.
U.S.A.



Director
Jon M. Faubion
Kansas State
University
U.S.A.



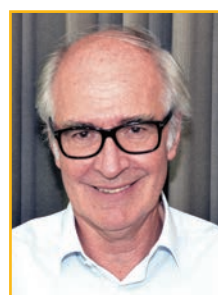
Director
Matthew K. Morell
IRRI Headquarters
Philippines



Director
Perry K.W. Ng
Michigan State
University
U.S.A.



Director
Deirdre E. Ortiz
Kellogg Co.
U.S.A.



Director
Jaan Perten
Perten Instruments
U.S.A.



Director
Jennifer S. Robinson
Bay State Milling
Company
U.S.A.

MAKING A DIFFERENCE

Volunteering to serve on an AACCI committee provides opportunities to gain skills and experience as well as the chance to give something back to the grains community while enriching your membership. Thank you to the following volunteers who served on the following committees; your dedication is appreciated!

Administrative, Advisory, and Ad Hoc Committees

2015 Annual Meeting Technical Program Planning Committee:
Program Team Chair: Devin J. Rose. **Program Team Vice Chair:** Satya Jonnalagadda. **Program Team Consultant:** Peter Koehler.
Scientific Initiative Track Chairs: Monjur Hossen, Susan Kamper, David F. Kendra, Chris L. Miller, Mary O'Meara, Bram Pareyt, Derek Stewart **Scientific Initiative Track Vice Chairs:** Lauren R. Brewer, YiFang Chu, Crispin A. Howitt, Simon Penson, Cristina M. Rosell, Katharina Scherf.

2015 Centennial Planning Committee: Chair: William A. Atwell.
Members: Dilek L. Austin, Lauren R. Brewer, Jan A. Delcour, Sean M. Finnie, David H. Hahn, Laura M. Hansen, Barry V. McCleary, Joshua D. Reid, Devin J. Rose. **Ex-Officios:** Steven C. Nelson, Deborah E. Rogers.

AACCI-ICC Membership Working Group: Chair: Laura M. Hansen. **Vice Chair:** John R.N. Taylor. **Members:** Mark L. Bason, Dave L. Braun, Floyd E. Dowell, R. Don Sullins

AACCI-ICC Publications Working Group: Chair: Stanley Cavanaugh. **Vice Chair:** Marta Izydorczyk. **Members:** Mirko Bunzel, Ravi Chibbar, Pierre Gelinas, Sangeeta Mukhopadhyay.

AACCI-ICC Scientific Events Working Group: Chair: Jan Willem van der Kamp **Vice Chair:** Kristof Brijs **Members:** Bob Cracknell, Hulya Dogan, Ximena Lopez, Gary Hou.

AACCI-ICC Standards and Methods Working Group: Chair: Paul Wehling. **Vice Chair:** Amine Jbeily. **Members:** Arnaud Dubat, Jon DeVries, E.B. Russell, Meinolf Lindhauer.

China Strategies Task Force: Chair: Robert L. Cracknell.
Members: Jinsong Bao, Stephane Cochet, Robert G. Gilbert, Weining Huang, Hongxin Jiang, Yulai Jin, Ning Li, PhD, Qiao-Quan Liu, PhD, Keshun Liu.

Finance Committee: Chair: Dave L. Braun. **Members:** Gerard Downey, Lydia Tooker Midness, Matthew K. Morell, Jennifer S. Robinson.

Food Safety, Quality, & Regulatory Committee (FSQRC): Chair: Barbara B. Heidolph. **Members:** Deann Akins-Lewenthal, Curtis E. Anderson, Tandace A. Bell, Bill Besson, Andreia Bianchini, Tim Black, Tom H. Black, Lakshmikantha Channaiah, Gina M. Clapper, Kia Compton, Kaydi Decker, Joel W. Dick, Janet K. Funke, Ellen B. Gay, Paul Harper, Gary Heiserman, Joe Horton, Charles R. Hurburgh, Jr., Laurie A. Hutton, Scott Jensen, Janice M. Levenhagen, Yan Li, Dirk E. Maier, Susan E. Martell, Brian McKim, Lindsey Mullenbach, Maureen C. Olewnik, Nicole M. Rees, Jennifer S. Robinson, Celetta Lee Sanders, Matthew Smith, Robert A. Sombke, Karina Spencer, Gretchen M. Stewart, Melonie Stoughton-Ens, Kent Symns, Nick Weigel, Lori A. Wilson, Rasma Zvaners

Foundation Board: Chair: Barbara B. Heidolph. **Members:** Margaret R. Bath, Lauren R. Brewer, Laura M. Hansen, Huifen He, Len Marquart. **Ex-Officios:** Trust Beta, Dave L. Braun,

Industry Executive Forum: Cochairs: Lydia Tooker Midness, R. Don Sullins

Nomination: Chair: Stuart A. Craig. **Members:** Jon M. Faubion, David H. Hahn, Marta S. Izydorczyk, Julie M. Jones, R. Don Sullins

Professional Development Panel: Chair: Sean M. Finnie.
Members: Juliano Luiz de Almeida, John M. Mathew, Ximena Quintero-Fuentes, Daniel D. Ramseyer, Andrew S. Ross.
Ex-Officio: Shima Agah

Scientific Advisory Panel: Chair: Christophe M. Courtin.
Members: Arthur D. Bettge, Jeff L. Casper, Weining Huang, Kati K. Katina, Sam Millar, Kathryn L. Sargent, Kris E. Spence, Maarten Van Oort. **Ex-Officios:** David H. Hahn, Satya Jonnalagadda, Matthew K. Morell, Devin J. Rose

Student Association: Chair: Shima Agah. **Vice Chair:** Elizabeth Pletsch. **Secretary-Treasurer:** Ryan J. Kowalski. **Product Development Chair:** Lingzhu Deng. **Online Communicator:** Leigh Schmidt. **Product Development Vice-Chair:** Tsogtbayar Baasandorj. **Ex-Officio:** Sean Finnie

Award Committees

Alsberg-French-Schoch Award Jury: Chair: Bruce R. Hamaker.
Members: Mike Gidley, Clodualdo C. Maningat, Yong-Cheng Shi,
Ex-Officio: Jennifer W. Gradnigo

Cecil F. Pinney Travel Award Jury: Chair: Barbara B. Heidolph.
Members: Alecia M. Kiszonas, Catrin Tyl, Sandra M. Vaz

Edith A. Christensen Award Jury: Chair: Anne R. Bridges.
Members: Stephen R. Delwiche, Janette A. Gelroth, Terry C. Nelsen, Elaine J. Sopiwnyk, Paul Wehling

Excellence in Teaching Award Jury: Members: Trust Beta, Deborah E. Rogers, Andrew S. Ross, Vijay Singh

Fellows Award Jury: Chair: Robert L. Cracknell. **Members:** Ravindra N. Chibbar, Perry K.W. Ng, Peter R. Shewry, John R.N. Taylor

Geddes Memorial Award: Member: Jan A. Delcour. **Members:** Jonathan W. DeVries, Elizabeth A. Knight, Martin G. Scanlon

Phil Williams Applied Research Award: Members: James N. BeMiller, Paul A. Seib, Peter R. Shewry, Jan Willem van der Kamp

Scholarship Committee: Chair: Trust Beta. **Members:** Kristof Brijs, Rolfe Bryant, Mirko Bunzel, Constance Chiremba, Harold Corke, Mark Haub, Ximena Quintero-Fuentes, Kris E. Spence

Texture Technologies Quality Research Award Jury: Chair: Jayne E. Bock. **Members:** Lauren R. Brewer, Robin K. Connelly, Marc I. Johnson, Sathya Kalambur, Alessandra Marti

Thomas Burr Osborne Medal Award Jury: Chair: Jan A. Delcour. **Members:** James N. BeMiller, Paul A. Seib, Peter R. Shewry, Jan Willem van der Kamp

Young Scientist Research Award Jury: Chair: Deirdre E. Ortiz. **Members:** Jinsong Bao, Devin J. Rose, Sergio O. Serna Saldivar, Jeanny E. Zimeri

Division Leadership

Division Leadership Council: Chair: David H. Hahn. **Members:** Rose Prabin Kingsly Ambrose, Anne M. Birkett, Ravindra N. Chibbar, Robin K. Connelly, Baljit Singh Ghotra, Monjur Hossen, John T. Manful, Jennifer S. Robinson, Supriya Varma

Biotechnology Division: Chair: Ravindra N. Chibbar. **Vice Chair:** Hongxin Jiang. **Secretary-Treasurer:** Pooba Ganeshan

Carbohydrate Division: Chair: Baljit Singh Ghotra. **Chair-Elect:** Senay Simsek. **Secretary-Treasurer:** Harkanwal Sandhu. **Division Program Chair:** Dilek Uzunalioglu

Engineering & Processing Division: Chair: Supriya Varma. **Vice Chair:** Dilek Uzunalioglu. **Past Chair:** Sathya Kalambur. **Secretary-Treasurer:** Sandeep Bhatnagar. **Student Representatives:** Sangeeta Mukhopadhyay, Divya Ramchandran

Milling & Baking Division: Chair: Jennifer S. Robinson. **Chair-Elect:** Arthur D. Bettge. **Past Chair:** Steven B. Larsen. **Treasurer:** Nicole M. Rees. **Secretary:** Rebecca A. Miller. **Advisory Board:** Sean M. Finnie, Karen B. Foehse, Eric Lewis, Heidi C. Long, Lori A. Wilson, Spencer H. Wise

Nutrition Division: Chair: Anne M. Birkett. **Vice Chair:** Elsayed M. Abdelaal. **Past Chair:** Mark Haub. **Treasurer:** Liyi Yang. **Secretary:** Suzanne Mutz-Darwell. **Student Representative:** Yunus E. Tuncil

Protein Division: Chair: Monjur Hossen. **Vice Chair:** Katharina Scherf. **Past Chair:** Clyde Don. **Secretary-Treasurer:** Bram Pareyt

Rheology Division: Cochairs: Rose Prabin Kingsly Ambrose, Robin K. Connelly. **Past Chair:** Baninder S. Sroan. **Secretary-Treasurer:** Wu Ge. **Award Chair:** Jon M. Faubion. **Program Chair:** Madhuvanti Kale.

Rice Division: Chair: John T. Manful. **Past Chair:** Delilah F. Wood. **Secretary-Treasurer:** Silvia Chuy. **Program Chair:** Jinsong Bao. **Member at Large:** Gloria B. Gagampang

Publication Committees

Book Committee: Chair: Rajen S. Mehta. **Members:** Dilek L. Austin, Rebecca A. Miller, Martin G. Scanlon, Jasbir K. Singh, Delilah F. Wood

Cereal Chemistry Editorial Board: Editor-in-Chief: Craig F. Morris. **Senior Editors:** F. William Collins, Jon M. Faubion, Marta S. Izdorczyk. **Associate Editors:** Joseph M. Awika, Byung-Kee Baik, Jinsong Bao, Ian L. Batey, Brian S. Beecher, M. Hikmet

Boyacioglu, PhD, Elaine Thompson Champagne, Christophe M. Courtin, Stephen R. Delwiche, Sean M. Finnie, Girish Ganjyal, Weining Huang, Peter Koehler, Maria Oszvald, Joe Panozzo, Kent D. Rausch, Martin G. Scanlon, Sergio O. Serna Saldivar, Michael J. Sissons, Jeff D. Wilson

Section Leadership

Canadian Prairie Section: Chair: Heather D. Maskus, **Vice Chair:** Dale Taylor

Central States Section: Interim Chair: Barbara B. Heidolph

Cereals & Europe (C&E) Section: Chair: Peter L. Weegels. **Secretary-Treasurer:** Maria Papageorgiou. **Student Representative:** Aboubakry Diallo. **Members:** Filip R. Arnaut, Frederic Auger, Gerard Downey, Andreas Redl, **Member at Large:** Robert J. Hamer. **Liaison for Mediterranean countries:** Joel Abecassis. **Web Manager:** Abde Arrachid

Cincinnati Section: Chair: Heidi C. Long. **Vice Chair:** Curtis E. Anderson. **Secretary-Treasurer:** Dave L. Braun

Downunder Section: Chair: Robert L. Cracknell. **Treasurer:** Philip G. Downie. **Secretary:** Larisa Lara Cato

Japan Section: Chair: Katsuyuki Hayakawa. **Vice Chair:** Youichi Kurimoto. **Secretary:** Masaharu Seguchi. **Advisory Board:** Seiichi Nagao, Noritaka Tsuge. **Section Board Members:** Yuki Onuma, Yasuto Sasaki, Takanobu Shibuta, Tetsuya Wasa, Yuji Yamada

Manhattan Section: Chair: Theresa L. Sutton. **Vice Chair:** Aaron L. Clanton. **Past Chair:** Rebecca A. Miller. **Secretary-Treasurer:** Sajid Alavi

Northern California Section: Chair: Jose J. Berrios. **Treasurer:** Carol A. Hudson

Northwest Section: Chair: Anthony J. Reuter. **Chair-Elect:** Lauren R. Brewer. **Past Chair:** Jeff L. Casper. **Treasurer:** Kevin H. Wright. **Secretary:** Senay Simsek

Pacific Northwest Section: Chair: Catherine Butti. **Past Chair:** Deanna Nash

Pioneer Section: Chair: Richard J. Kendrick. **Secretary-Treasurer:** Stephen Schorn

Technical Committees

Approved Methods Technical Leadership: Chair: Anne R. Bridges. **Vice Chair:** Paul Wehling. **Members:** Elsayed M. Abdelaal, Helen M. Allen, Andreia Bianchini, Larisa Lara Cato, Stuart A. Craig, Stephen R. Delwiche, Jonathan W. DeVries, Clyde Don, Diane L. Gannon, Kelly L. Henderson, Gary Hou, J. Michael Hudson, Padmanaban G. Krishnan, Tom McKamey, Rebecca A. Miller, Simon Penson, Polamreddy V. Reddy, Andrew Ross, E.B. (Elizabeth) L. Russell, Katharina Scherf, Raymond D. Shillito, Michael J. Sissons, Elaine J. Sopiwnyk, Michael Tilley, Ning Wang

Asian Products: Cochairs: Larisa Lara Cato, Gary Hou. **Members:** Helen M. Allen, Esey G. Assefaw, Richard Y. Chen, Graham B. Crosbie, Bin X. Fu, David W. Hatcher, Craig F. Morris, Hideki Okusu, Andrew S. Ross, Linda M. Schlichting, Vicky A. Solah, Yibin Zhou

Bioactive Compounds Methods: Chair: Elsayed M. Abdelaal. **Vice Chair:** Boris Nemzer. **Members:** Nancy Ames, Joseph M. Awika, Trust Beta, Mirko Bunzel, K. Gyebi Duodu, Bin X. Fu, Padmanaban G. Krishnan, Qin Liu, Perry K.W. Ng, Sanaa Ragae, Roberto L. Serrano, Michael J. Sissons, Liyi Yang

Bread Baking Methods: Cochairs: Helen M. Allen, Rebecca A. Miller. **Members:** Connie E. Briggs, Margo S. Caley, Larisa Lara Cato, Mark E. Ingelin, Nicole M. Rees, Yvonne B. Supeene, Mingwei Wang

Check Sample: Chair: Tom McKamey. **Members:** Mark L. Bason, Tandace A. Bell, Andreia Bianchini, Frank A. Manthey, Twylla K. P. McKendry, Kathryn S. Phillips, Terry A. Selleck, Raymond D. Shillito, John Szpylka, Jason Van Fossan, Garrett Zielinski

Chemical Leavening Agents: Chair: E.B. (Elizabeth) L. Russell. **Members:** Cindy G. Alosco, Robert G. Berube, Sharon L. Book, N'Jere English, Siobhan Foley, Joyce Yue Liao, W.D. Alfred Lin, Nita Livvix, Diana Lutmer, Trey Muller-Thym, Jesse Stinson, Supriya Varma

Dietary Fiber and Other Carbohydrates: Cochairs: Stuart A. Craig, Jonathan W. DeVries. **Members:** Mary Ellen Camire, Annette Evans, Qiang Liu, Robert L. Magaletta, Clodualdo C. Maningat, Kornelija Matkovic, Barry V. McCleary, Rajen S. Mehta, William D. Park, Kathryn S. Phillips, Louise Slade, Kris E. Spence, Jan Willem van der Kamp, Garrett Zielinski

Enhancements Review: Chair: Paul Wehling. **Members:** Arthur D. Bettge, Stephen R. Delwiche, Janette A. Gelroth, Padmanaban G. Krishnan

Experimental Milling: Chair: Polamreddy V. Reddy. **Members:** Hiroshi Ando, Scott R. Baker, Richard Y. Chen, Arnaud Dubat, Diane L. Gannon, Chunjian Lin, Darrel S. Nelson, Nicole M. Rees, James E. Schuh, Thorne R. Seese, Edmund J. Tanhehco

Food Safety and Microbiology: Chair: Andreia Bianchini. **Members:** Nancy Ames, Ron Burke, Lakshmikantha Channaiah, Gina Clapper, Girish Ganjyal, Chunjian Lin, Dongmin Mu, Mary O'Meara, E. B. Russell, Terry A. Selleck, Joe Shebuski, Erdal Tuncan, Shyam Verma

Methods for Grain and Flour Testing: Chair: Simon Penson. **Members:** Arthur D. Bettge, Clyde Don, Nancy M. Edwards, Janette A. Gelroth, Arun K. Lekhi, Wayne R. Moore, Terry C. Nelsen, Debbie C. Sobering, Elaine J. Sopiwnyk, Philip C. Williams

Molecular Biomarkers for Grain: Chair: Raymond D. Shillito. **Members:** Tandace A. Bell, Anne R. Bridges, Ravindra N. Chibbar, Gina M. Clapper, Tigst Demeke, Dick DePalma, Larry Freese, Michael Grosz, David Levin, Guomin Shan, PhD, Edwin P. Smith, Deepak K. Srivastava, Pamela L. Teran

Oat and Barley Products: Chair: Kelly L. Henderson. **Members:** Elsayed M. Abdelaal, Nancy Ames, Jonathan W. DeVries, Tamer H A Gamel, Paivi M. Kanerva, Padmanaban G. Krishnan, Arun K. Lekhi, Barry V. McCleary, Lindsey Mullenbach, Clarence W. Newman, Tamara A. Reichkitzer, Francis H. Webster, Shyh-Jaung J. Yen

Pasta Products Analysis: Chair: Michael J. Sissons. **Members:** Paul B. Ebbinghaus, Clara Fares, Bin X. Fu, Ann Heider, Hamit Koksel, Frank A. Manthey, Brian Nelson, Hideki Okusu, Elaine J. Sopiwnyk

Physical Testing Methods: Cochairs: Clyde Don, Elaine J. Sopiwnyk. **Members:** Scott R. Baker, Mark L. Bason, Johan Bjurenvall, Rangan Chinnaswamy, Paul Cliffe, Arnaud Dubat, Salvatore F. Iaquez, Mark E. Ingelin, Mario Jekle, Peter Koehler, Wayne R. Moore, Darren A. Robey, Deborah E. Rogers, Paolo Santangelo, Harry D. Sapirstein, Martin G. Scanlon, Katharina Scherf

Protein and Enzyme Methods: Cochairs: Katharina Scherf, Michael Tilley. **Members:** Clyde Don, Peter Koehler, Maryke Labuschagne, Patrick L. Selmaier, Sean A. Tinkey

Pulse and Legume: Chair: Ning Wang. **Members:** Byung-Kee Baik, Tanya Der, Peter Frohlich, Clifford A. Hall, III, Jeeyup (Jay) Han, Shannon D. Hood-Niefer, Linda J. Malcolmson, Heather D. Maskus, Joe Panozzo, Janice M.W. Rueda, Tam Tran, Mehmet Caglar Tulbek, Robert T. Tyler, Albert Vandenberg, Jennifer A. Wood

Rice Milling and Quality: Chair: Mark L. Bason. **Members:** Jinsong Bao, Priscila Zaczuk Bassinello, Elaine Thompson Champagne, Stephane Cochet, Cheryl F. Earp, Melissa Fitzgerald, Talwinder S. Kahlon, Anna M. McClung, Terry Siebenmorgen, Rachele Ward

Soft Wheat and Flour Products: Cochairs: Diane L. Gannon, Andrew S. Ross. **Members:** Byung-Kee Baik, Arthur D. Bettge, Wookyung Chung, Dean W. Creighton, Arnaud Dubat, Sean M. Finnie, Gang Guo, Lynn C. Haynes, Barbara B. Heidolph, James P. Janson, Yulai Jin, Teresa Johns, Meera Kweon, Steven B. Larsen, Bon Lee, Chunjian Lin, Terry C. Nelsen, Zory Quinde-Axtell, Fengcheng Wang

Spectroscopic Methods: Chair: Stephen R. Delwiche. **Members:** Robert Cocciardi, Floyd E. Dowell, Arnaud Dubat, Gang Guo, Mark Host, Charles R. Hurburgh, Jr., Yueshu Li, Chunjian Lin, John M. McCammon, Twylla K. P. McKendry, Samuel Millar, Gavin O'Reilly, Marvin R. Paulsen, Kamaranga H S Peiris, PhD, Lukasz N. Pietrzak, Wes Shadow, Debbie C. Sobering, Mehmet Caglar Tulbek, Martin Whitworth, Philip C. Williams

Statistical Advisory: Chair: Michelle Mrozik Manderfeld. **Members:** Arthur D. Bettge, Stephen R. Delwiche, Neal B. Gallagher, Michelle Mrozik Manderfeld, Tom McKamey, Terry C. Nelsen, Paul Wehling, Philip C. Williams, Xiaorong Wu

Vitamin, Minerals and Lipids: Cochairs: Padmanaban G. Krishnan, Kathryn S. Phillips. **Members:** Daniel Berg, Mary Ellen Camire, Gina M. Clapper, Jonathan W. DeVries, Barbara B. Heidolph, John L. MacDonald, Peter M. Ranum, John Szpylka, Robert Lee Wright


Yeast Evaluation: Chair: J. Michael Hudson. **Members:** Barbara B. Heidolph, Mareile Heitmann, Christian G. Lupp, Ombretta P olonghi, Scott W. Wise, Shuping Yan

Headquarters and Staff

AACC International
 3340 Pilot Knob Road
 St. Paul, MN 55121 U.S.A.
Phone: +1.651.454.7250
E-mail: aacc@scisoc.org
Website: aaccnet.org
Meeting Website: aaccnet.org/meet

The listing below provides the names of some key AACC International staff contacts.

Executive Vice President/Publisher	Amy L. Hope
Annual Meeting	Betty Ford Rhonda Wilkie
Approved Methods	Anne Bridges
Cereal Chemistry®	Craig F. Morris
Cereal Foods World®	Jody Grider
Cereal Foods World Advertising	Louis Mattia, A. Fassano Company
Check Sample	Jody Grider
Divisions and Local Section Events	Cindy Scheller
Exhibit, Sponsorship, Ad Sales	Louis Mattia, A. Fassano Company
Finance	Kim Davis
Marketing	Susan Kohn Melissa Maggio
Membership & Subscription Services	Denise Kessler
Operations/Membership & Communications	Michelle Bjerkness Elizabeth Conklin Lauren McGinty
Publications	Greg Grahek



Our Science, Our Future

David Lineback, 1983 AACCI President

“Needs, challenges and opportunities for AACCI and the cereal grain science industry will be great. The need to form partnerships (collaborations) with other organizations will continue and expand. Increased world population will emphasize cereal grains, their roles and values in diets; needs for individuals qualified for jobs in these areas will increase; challenges from ‘myth’s generated, such as gluten and ‘GMOs’ now, will continue/expand; new/improved cereal grain food products and processing technologies will be emphasized; cereal grains with improved yields and desired characteristics will continue to challenge; and numerous others. AACCI and the cereal grain industry will be challenged strongly and will need to be very selective in selecting those issues to which they can best contribute with the resources available.”



Member Volunteers Make a Difference!

Special thanks to all the members, past and present, who have provided their unique talents, time, energy, and enthusiastic support for AACCI. Your dedication and involvement is exceptional and will ensure AACCI’s continued success and future growth for years to come!



Experience the innovation first-hand. Bühler's Food Innovation Center is a food-grade facility designed to support your efforts from feasibility study to product launch. Customized trials offer mixing, extrusion, and drying for scale-up to production. Tailored training and extrusion workshops will help you improve your current processes, develop new processes, and increase overall efficiency. Come and explore the innovation opportunities firsthand.

Visit us at Booth #102

Bühler Inc., PO Box 9497, Minneapolis, MN 55440, T 763-847-9900,
buhler.minneapolis@buhlergroup.com, www.buhlergroup.com

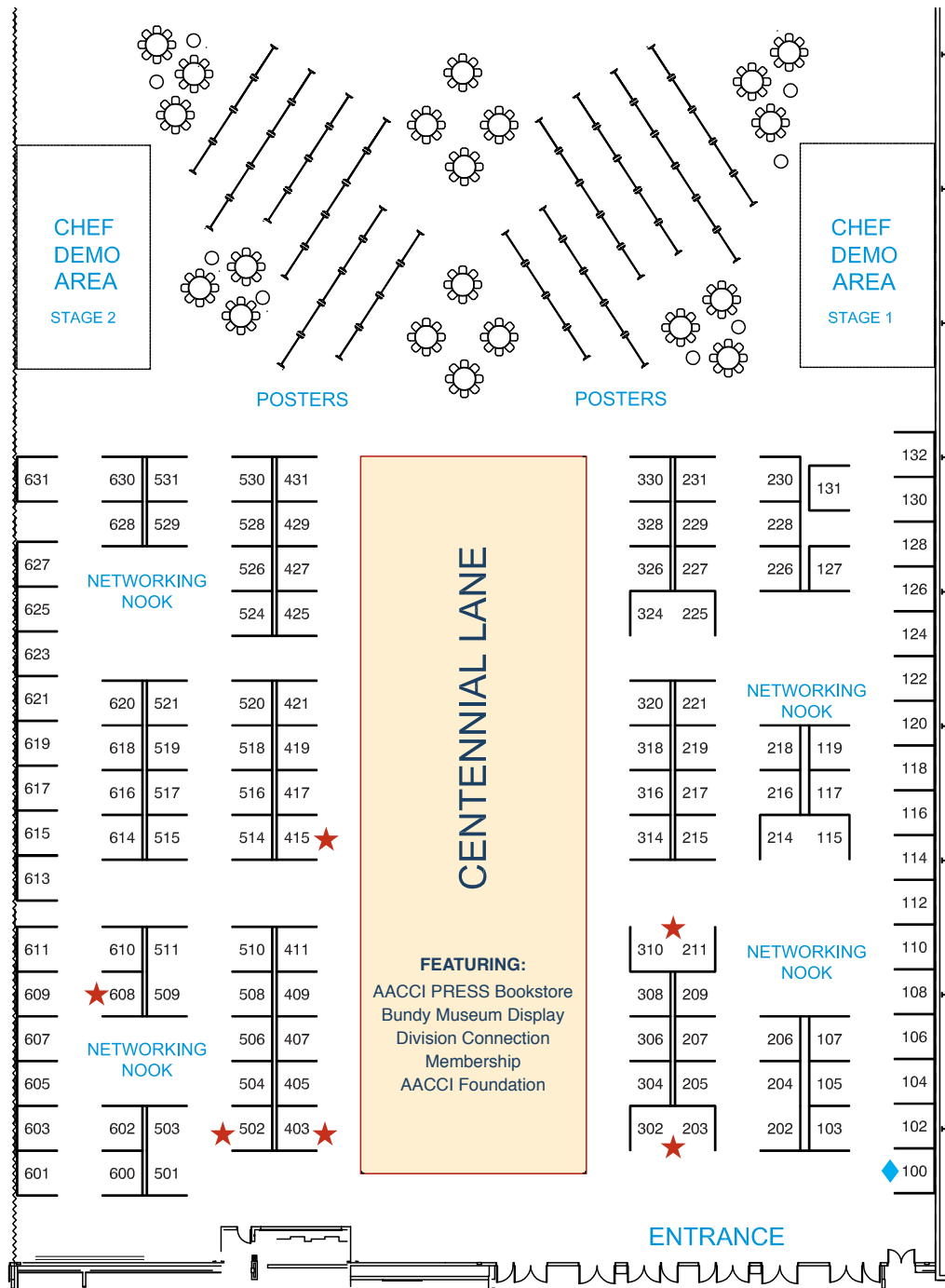


Innovations for a better world.



2015 AACCI Centennial Meeting Exhibition

Minneapolis Convention Center • Hall A



Join Chef Asbell at the FONA International, Inc. Booth 100 (◆) on Monday, October 19, 4:00 – 6:00 p.m. to sign her latest cookbook “*The Whole Grain Premise*.” Stop by to receive your free copy, courtesy of FONA International, Inc. Limited quantities.

Stop by these booths for exhibit-sponsored prize drawings on Monday, Tuesday, and Wednesday!

Must be present to win. ★ Prize drawing booths

Monday's Booth		Drawing
608	McCormick & Company	12:30 p.m.
502	Grain Millers	1:30 p.m.
Tuesday's Booths		Drawing
608	McCormick & Company	12:30 p.m.
403	Megazyme	1:00 p.m.
415	MGP Ingredients Inc.	1:15 p.m.
203/302	C.W. Brabender	1:45 p.m.
Wednesday's Booths		Drawing
608	McCormick & Company	8:45 a.m.
211/310	FOSS	9:15 a.m.
502	Grain Millers	9:30 a.m.

EXHIBIT HALL

Visit the 2015 Annual Meeting Exhibition to discover the latest products and services that advance the work of the industry. To help plan your time with the exhibitors and find your desired products and services, please use the following descriptions supplied directly from the exhibiting company. Exhibitors reserving space after this section went to press are listed in your Program Addendum.

Exhibition Hall—Exhibit and Poster Hours

Hall A, CC

Sunday, October 18

2:00 – 6:00 p.m. Exhibitor Set-Up

Monday, October 19

7:00 – 9:00 a.m. Exhibitor Set-Up

7:00 – 11:00 a.m. Poster Set-Up by Authors

12:00 – 2:00 p.m. Grand Opening Exhibition – Exhibits, Posters, and Lunch with Chef Demonstrations

12:00 – 7:00 p.m. Poster Viewing

4:00 – 6:00 p.m. Exhibits Open

4:00 – 6:00 p.m. Poster Viewing with Authors

Student Poster Authors Present
(4:00 – 4:30 p.m.)

Poster Authors Present (odd-numbered posters 4:30 – 5:45 p.m.)

Tuesday, October 20

10:00 a.m. – 7:00 p.m. Poster Viewing

12:00 – 2:00 p.m. Exhibits, Posters, and Lunch with Chef Demonstrations

4:00 – 6:00 p.m. Exhibits Open

4:00 – 6:00 p.m. Poster Viewing with Authors

Poster Authors Present (even-numbered posters 4:15 – 5:30 p.m.)

Wednesday, October 21

8:30 – 10:00 a.m. Exhibits, Poster Viewing and Coffee

10:30 a.m. – 12:30 p.m. Exhibit and Poster Take-Down

Alphabetical Listing of Exhibitors

† AACC International Corporate Member

* Participant in Supplier Innovation Session

122† ADM, 4666 Faries Parkway, Decatur, IL 62526 U.S.A.; Telephone: +1.844.441.FOOD; Web: www.adm.com/food; Email: food@adm.com. At ADM, our ingredients and flavors are designed to meet consumer demand across virtually every segment. Let our team of technical specialists, product developers and food marketers innovate and formulate your next big idea.

126† ADM/Matsutani LLC—Fibersol, Suite 1240, 500 Park Blvd., Itasca, IL 60143 U.S.A.; Telephone: +1.630.250.8720; Fax: +1.630.250.8725; Web: www.fibersol.com; E-mail: info@fibersol.com. Fibersol®, a supplier of soluble dietary fiber, offers a full line of fiber ingredients that can be used to improve the nutritional profile and increase the fiber content of any food application without compromising taste, quality, and enjoyment for the consumer.

115/ 214 Almond Board of California, 1150 9th Street, Suite 1500, Modesto, CA 95354 U.S.A.; Telephone: +1.209.549.8262; Web: www.almonds.com/food-professionals; E-mail: foodprofessionals@almondboard.com; Facebook: www.facebook.com/californiaalmonds; Twitter: @almonds. ABC supports almond growers and processors through a research-based approach to all aspects of production and marketing. Since 1973, the board has invested over \$42 million in research on almond production, quality & safety, nutrition, and environmental aspects of farming. For more information, visit www.almonds.com/food-professionals.

[See our ad on page 18.](#)

508 American Proficiency Institute, 1159 Business Park Drive, Traverse City, MI 49686 U.S.A.; Telephone: 1.855.FOODPT1; Fax: 1.855.900.5084; Web: www.foodpt.com; E-mail: foodtest@foodpt.com. American Proficiency Institute (API) offers independent proficiency testing programs for food chemistry and microbiology laboratories. We offer an extensive catalog of food relevant analytes in matrices such as meat, cereal, and dairy. API is accredited by A2LA to provide proficiency testing according to the requirements of ISO/IEC 17043:2010, Certificate #3094.01.

106† ANKOM Technology, 2052 O'Neil Road, Macedon, NY 14534 U.S.A.; Telephone: +1.315.986.8090; Fax: +1.315.986.8091; Web: www.ankom.com; E-mail: ntedesche@ankom.com; Facebook: www.facebook.com/ANKOMTechnology; Twitter: www.twitter.com/ankomtech. ANKOM Technology manufactures analytical instrumentation for the food and feed industry. They are known for automating labor-intensive analytical methods and the development of filter bag technology (FBT). ANKOM Technology systems are capable of analyzing TDF (IDF/SDF), crude/detergent fiber, and fat/oil. Our systems will reduce your analytical costs and increase your productivity.

202/ 204† Ardent Mills, 1875 Lawrence Street, Denver, CO 80202 U.S.A.; Telephone: 1.800.851.9618; Web: www.ardentmills.com. Ardent Mills is the premier flour-milling and ingredient company whose vision is to be the trusted partner in nurturing its customers, consumers, and communities through innovative and nutritious grain-based solutions. Ardent Mills' operations and services are supported by more than 40 flour mills and bakery-mix facilities, along with a specialty bakery and Mobile Innovation Center, all located in the United States, Canada, and Puerto Rico.

Deeply rooted in communities throughout North America, Ardent Mills is headquartered in Denver, CO, and employs more than 100 certified millers, supporting thousands of local jobs and contributing billions of dollars to local economies. To learn more about Ardent Mills, visit www.ardentmills.com.

- 229*** **Baker Perkins**, 3223 Kraft Avenue SE, Grand Rapids, MI 49512-2027 U.S.A.; Telephone: +1.616.784.3111; Fax: +1.616.784.0973; Web: www.bakerperkins.com; E-mail: bpinc@bakerperkins.com; Facebook: www.facebook.com/bakerperkinsgroup; Twitter: @bakerperkins. Baker Perkins supplies complete process lines and unit machines for breakfast cereals from flakes to co-extruded pillows. Either traditional rotary steam cookers or twin-screw cooker extruders are used in conjunction with flaking rolls, toasters, shredders, dryers, and syrup coating units to form versatile plants that can be easily extended.
- 528** **Bastak Gida Mak Med**, Ivedik OSB 1354 Cad 1387 Sok No. 19, Yenimahalle, Ankara 06370 Turkey; Telephone: +90 312 395 67 87; Fax: +90 312 395 67 88; Web: www.bastak.com.tr; E-mail: export@bastak.com.tr. Our company, Bastak Gida Makine Medikal Paz.Ith.Ihr.San.Tic.Ltd.Sti., was established in 1999 in Ankara, Turkey. After this time, we have begun to produce flour additives and quality control apparatus. Our fundamental principle is the satisfaction of the valuable clients. We have exported our instruments to more than 50 countries and our 7,000 instruments are working well in different countries of the world. Our company gives great importance to R&D studies.
- 105†*** **Bay State Milling Company**, 100 Congress Street, 2nd Floor, Quincy, MA 02169-0948 U.S.A.; Telephone: +1.617.328.4400; Telephone 2: +1.617.272.6404; Fax: +1.617.479.8910; Web: www.BayStateMilling.com; E-mail: infobsm@bsm.com; Facebook: www.facebook.com/baystatemilling; Twitter: www.twitter.com/baystatemilling. Bay State Milling supports the next generation of grain-based foods by providing the leading array of plant-based ingredients. With access to a portfolio of traditional and specialty flours, ancient and sprouted grains, varietal development, custom blending, and the Rothwell Grain Essentials Center, you can turn today's ideas into tomorrow's successful products.

[See our ad on page 20.](#)

- 607†** **BENEO Inc.**, 201 Littleton Road, 1st Floor, Morris Plains, NJ 07950 U.S.A.; Telephone: +1.973.867.2140; Fax: +1.973.867.2141; Web: www.beneo.com. BENEEO manufactures and markets functional ingredients with nutritional and technical advantages, derived from chicory roots, beet sugar, and rice. BENEEO is the ideal partner to help improve the health (weight and energy management, digestive, bone health), taste, texture, and nutritional value (fat and sugar replacement/fiber enrichment) of a product.
- 417†** **Bepex International LLC**, 333 Taft Street NE, Minneapolis, MN 55413 U.S.A.; Telephone: +1.612.331.4370; Telephone 2: 1.800.372.3739; Web: www.Bepex.com; E-mail: info@bepex.com; Facebook: www.facebook.com/BepexInternational; Twitter: @bepexintl. Bepex operates a Food Process Development Center where customers produce useful

quantities of food-grade ingredients for a fixed cost and before making any capital equipment investment. Unit operations include: • thermal processing • size reduction • mixing • agglomeration. After testing, equipment is designed and supplied per your application requirements.

[See our ad on page 39.](#)

- 209 †*** **Best Cooking Pulses Inc.**, 124 10th Street NE, Portage La Prairie, MB R1N 1B5 Canada; Telephone: +1.204.857.4451; Fax: +1.204.239.6885; Web: www.bestcookingpulses.com; E-mail: sales@bestcookingpulses.com; Twitter: @bestpulses. A Canadian family company since 1936, it sustainably mills NA pulses: BEST flours (whole/split yellow/green pea, navy/pinot/black bean, chickpea, whole/decorticated green/brown/red/ French lentils), pea fibers, split peas, and whole pulses, conventional or certified organic, BRC GFSL, CGC HACCP, Kosher check, and WBEN. Pulse ingredients for healthy diets and a sustainable world.
- 118** **BI Nutraceuticals**, 2550 El Presidio Street, Long Beach, CA 90810 U.S.A.; Telephone: +1.310.669.2100; Fax: +1.310.637.3644; Web: www.botanicals.com; E-mail: contact@botanicals.com. BI is the largest supplier of botanical ingredients in the United States. We manufacture and supply hundreds of products, including botanical powders, extracts, vitamin mineral blends, and more. We are cGMP compliant as well as SQF, organic, Kosher, Halal, and gluten-free certified.
- 510** **Blue Diamond Growers**, 1802 C Street, Sacramento, CA 95811 U.S.A.; Telephone: +1.916.446.8500; Fax: +1.916.446.8332; Web: www.bdingredients.com; E-mail: ingredientsales@bdgrowers.com. Blue Diamond Growers, established in 1910, is the world's largest processor and marketer of almonds. Blue Diamond is known for quality and service in over 90 countries. Our industrial products include in-shell, brown, and manufactured almonds in a variety of forms for applications across confectionery, bakery, dairy, and snacking.
- 203/302†** **Brabender GmbH & Co. KG**, Kulturstrasse 51-55, Duisburg, DE-47055 Germany; Telephone: +49 0 203 7788 0; Web: www.brabender.com; E-mail: food-sales@brabender.com. As a leading supplier for the food and chemical industries worldwide, Brabender® develops, manufactures, and distributes instruments and equipment for the testing of material quality and physical properties in all areas of research, development, and production. In the food area, Brabender® offers a broad range of instruments for sample preparation and quality control, especially for the milling and baking industries.
- 526** **Bratney Companies**, 3400 109th Street, Des Moines, IA 50322 U.S.A.; Telephone: +1.515.270.2417; Fax: +1.515.276.2067; Web: www.Bratney.com; E-mail: Ann.Stutler@Bratney.com. Bratney Companies is known for providing world-class equipment, processes, and solutions. We bring innovation and value with manufacturers such as Cimbria, Concetti, and BoMill. These, in addition to our complete offering of high-quality engineering, design, and construction, make us the company to consider for your next project.

- 613† Brolite Products Inc.**, 1900 S. Park Avenue, Streamwood, IL 60107-2944 U.S.A.; Telephone: +1.630.830.0340; Telephone 2: 1.888.276.5483; Fax: +1.630.830.0356; Web: www.bakewithbrolite.com; E-mail: d.delghingaro@broliteproducts.com. Brolite Products is a leading manufacturer of high-quality baking ingredients. We have a variety of blends, and we can even design customized formulations and specialty blends all in our SQF Level 3 facility. Since 1928, we've built partnerships with our customers to create the perfect blend.
- 427† Brookfield Engineering Labs., Inc.**, 11 Commerce Blvd., Middleboro, MA 02346-1031 U.S.A.; Telephone: +1.508.946.6200; Telephone 2: 1.800.628.8139; Fax: +1.508.946.6262; Web: www.brookfieldengineering.com; E-mail: sales@brookfieldengineering.com; Twitter: www.twitter.com/BrookfieldEng. Brookfield is the world's leading manufacturer of viscometers and rheometers for laboratory and online process measurement and control. Brookfield also offers solutions for both texture analysis and powder flow applications in the form of our low-cost CT3 texture analyzer and PFT powder flow tester.
- 620† Budenheim**, 2219 Westbrooke Drive, Columbus, OH 43228 U.S.A.; Telephone: +1.614.345.2400; Fax: +1.614.345.2440; Web: www.budenheim.com; E-mail: diana.lutmer@budenheim.com. For more than 100 years, Budenheim has offered forward-thinking sustainable solutions with high-quality phosphates and specialty products worldwide. Products from Budenheim make a valuable contribution to a healthy life as essential nutrients for food enrichment and as efficient excipients in pharmaceutical formulations.
- 102† Buhler**, 13105 12th Avenue, Plymouth, MA 55441 U.S.A.; Telephone: +1.763.847.9900; Web: www.buhler.com. Buhler is your global technology partner for the food industry. We are a market leader in processing equipment for various industries, including grain milling and extrusion systems. The Buhler Food Innovation Center, located in Plymouth, MN, is a food-grade facility designed for research, education, and consumer-ready testing.
-
- See our ad on page 66.**
-
- 203/ 302† C.W. Brabender Instruments Inc.**, 50 E. Wesley Street, South Hackensack, NJ 07606-1416 U.S.A.; Telephone: +1.201.343.8425; Fax: +1.201.343.0608; Web: www.cwbrabender.com; E-mail: cwbi@cwbrabender.com; Facebook: www.facebook.com/cwbrabender?ref=hl. The forerunner in manufacturing testing equipment designed to measure and record characteristics of various polymers in the chemical and food industries.
-
- See our ad on the inside front cover.**
-
- 617 Cain Food Industries, Inc.**, 8401 Sovereign Row, Dallas, TX 75247 U.S.A.; Telephone: +1.214.630.4511; Fax: +1.214.630.4510; Web: www.cainfood.com; E-mail: sales@cainfood.com. Cain Food Industries, Inc. has been a leading supplier to the baking industry for over 40 years. Now in its third generation of family ownership, we have an established legacy of quality products and superior customer service. We take pride in being your preferred supplier of technical baking ingredients.
- 316† California Natural Products**, PO Box 1219, Lathrop, CA 95330-1219 U.S.A.; Telephone: +1.209.858.2525; Web: www.cnp.com; E-mail: john.ashay@cnp.com. CNP manufactures in the USA syrups and solids from rice, tapioca and potato providing natural and organic bakers and food product developers with syrups, binders, glycemic control, sugar reduction, fat & saturated fat reduction, emulsification and shelf life extension. OU, QAI Organic, SQF Level III, and GIG certified gluten free.
- 602† Canadian International Grains Institute**, 1000 303 Main Street, Winnipeg, MB R3C 3G7 Canada; Telephone: +1.204.983.5344; Web: www.cigi.ca; E-mail: cigi@cigi.ca; Twitter: @cigiwinnipeg. Cigi was established in 1972 in Winnipeg, Canada. We work with the grain and field crop value chain throughout Canada and internationally drive development and utilization of Canadian agricultural products. Over 42,000 grain, oilseed, pulse, and special crops industry representatives from 115 countries have participated in Cigi programs and seminars.
- 218 Carl Zeiss Microscopy GmbH**, 1 Zeiss Drive, Thornwood, NY 10594 U.S.A.; Telephone: 1.800.233.2343; Fax: 1.800.488.6351; Web: www.zeiss.com. For years, ZEISS solutions have been enabling fast and nondestructive analyses of the key quality parameters on the harvesting machines and in the lab. Corona extreme and InProcess® software is the spectrometer system designed to increase productivity in agriculture analysis in extreme conditions for the entire product life cycle.
- 221 Carmi Flavor & Fragrance Inc.**, 6030 Scott Way, Commerce, CA 90040-3516 U.S.A.; Telephone: +1.323.888.9240; Fax: +1.323.888.9339; Web: www.carmiflavors.com; E-mail: sales@carmiflavors.com; Facebook: www.facebook.com/carmiflavors; Twitter: www.twitter.com/carmiflavors. Carmi Flavors, founded in 1979, is the manufacturer of a complete line of ready-to-use flavors. With Carmi, you will receive prompt service, high quality, flexibility, great prices, and no minimum required quantities on orders.
- 326† C-Cell by Calibre**, 5-6 Asher Court Lyncastle Way, Appleton, Warrington, WA4 4ST United Kingdom; Telephone: +44 1925 860401; Fax: +44 1925 860402; Web: www.C-Cell.info; E-mail: info@C-Cell.info; Twitter: @CalibrePaul. C-Cell is the world's most advanced system for monitoring bakery product quality. C-Cell provides information on the internal structure and external features of bakery products. New developments include crust analysis, bread scoring, and distribution 'scoring' for inclusions such as fruit, nuts, and ingredients. Visit our booth for further information.
- 519 CE Elantech, Inc.**, Suite 5, 170 Oberlin Avenue N., Lakewood, NJ 08701 U.S.A.; Telephone: +1.732.370.5559; Fax: +1.732.370.5888; Web: www.ceelantech.com; E-mail: michael@ceelantech.com. CE Elantech, Inc. is a full-line stocking distributor of official consumables and parts. Featured instruments: Thermo Flash 2000 Combustion Elemental Analyzer: N/Protein through CHNS/O Thermo Microstructure: including Pycnomatic ATC Densitometer. Next Instruments: Near Infrared Transmission, NutriScan, SeedCount Image Analyzers. Navas Instruments: Thermo-gravimetric Analyzers, Sample Fusion/LOI Analyzers for XRF Analysis.

- 506† Cereal Ingredients Inc.**, 4720 S. 13th Street, Leavenworth, KS 66048 U.S.A.; Telephone: +1.913.727.3434; Fax: +1.913.727.3681; Web: www.cerealingredients.com; E-mail: jcharnowski@cerealingredients.com. CII is a BRC certified “A” manufacturer of flavor inclusions, toppings, and functional ingredients to add protein and/or fiber to RTE and baked products. Our two plant are centrally located. Let our R&D lab and applications pilot plant work with your idea to develop a perfect addition enhancing your product.
- 501/ 503†* CHOPIN Technologies**, 19955 West 162nd Street, Olathe, KS 66062 U.S.A.; Telephone: +1.913.707.5000; Web: www.chopin.fr; E-mail: itrood@chopininc.com; Twitter: @ChopinTech. CHOPIN Technologies, a Tripetto & Renaud subsidiary, is specialized in methods and equipment for the quality control of cereals, flours, and their by-products. The company offers products and services to cereal industries needing to carry out analyses to satisfy operational requirements and current regulations and to meet customer specifications.
-
- See our ad on page 43.**
-
- 318 Church & Dwight Co. Inc.**, 469 N. Harrison Street, Princeton, NJ 08540-3510 U.S.A.; Telephone: 1.800.221.0453; Web: www.ahperformance.com. Church & Dwight is a leading marketer of sodium, ammonium, and potassium bicarbonate and is well recognized by the trusted Arm & Hammer brand. We produce sodium bicarbonate at two North American plants, ensuring our customers a reliable supply of product manufactured to the highest levels of quality and purity.
- 516 Clasen Quality Coatings, Inc.**, 5126 West Terrace Drive, Madison, WI 53718 U.S.A.; Telephone: +1.608.467.1130; Web: www.clasen.us; E-mail: info@clasen.us; Facebook: www.facebook.com/pages/Clasen-Quality-Coatings/142576942476546; Twitter: www.twitter.com/Clasen-Coatings. Clasen Quality Coatings (CQC) is a manufacturer of confectionery coatings, chocolate, and fillings. Our product lines include varieties of milk, dark, white, yogurt, peanut butter, colored, and flavored formulations. We also offer organic, dairy-free, nutritionally enhanced, natural, no-sugar-added, and trans-free coatings—just to name a few.
- 618† Corbion Caravan**, 7905 Quivira Road, Lenexa, KS 66215 U.S.A.; Telephone: 1.800.669.4092; Fax: +1.913.888.4970; Web: www.corbion.com; E-mail: foodus@corbion.com; Twitter: [@Corbion](https://twitter.com/Corbion). Corbion is the global market leader in lactic acid, lactic acid derivatives, and lactides and a leading company in functional blends containing enzymes, emulsifiers, minerals, and vitamins.
- 405† CPM Wolverine Proctor LLC**, 251 Gibraltar Road, Horsham, PA 19044 U.S.A.; Telephone: +1.215.443.5200; Fax: +1.215.443.5206; Web: www.wolverineproctor.com; E-mail: sales@cpmwolverineproctor.com. Complete line of energy-efficient dryers, coolers, impingement ovens (Jet-Tube or Parajet nozzle), Jetzone fluid bed dryers/puffers/toasters, shredding mills, flaking mills, and batch cookers. Our Ultra Sanitary SCFIII Dryer design has been taken to a whole new level of cleanliness. Tech Center offers continuous and batch testing for a many products.
-
- See our ad on page 30.**
-
- 219† Dakota Specialty Milling**, 4014 15th Avenue N., Fargo, ND 58102 U.S.A.; Telephone: +1.701.282.9656; Fax: +1.701.282.9743; Web: www.dakotaspecialtymilling.com; E-mail: customerservice@dakotaspecialtymilling.com. Dakota Specialty Milling is the trusted global supplier of custom-milled whole grains, multigrain, ancient grain, and gluten-free ingredients and blends for bakers and processors of variety breads, hot and RTE cereals, crackers, granolas, nutritional bars, snacks, and donuts.
- 231† David Michael & Co.**, 10801 Decatur Road, Philadelphia, PA 19154-3209 U.S.A.; Telephone: +1.215.632.3100; Fax: +1.215.637.3920; Web: www.dmflavors.com; Twitter: @dmflavors. Since 1896, David Michael & Co. has been recognized as an innovation leader in the flavor industry. Known as a major worldwide supplier of vanilla, our core strengths go far beyond vanilla to include over 40,000 savory, fruit, and spray-dried flavors. 1.800.DM.FLAVORS.
- 330 Domino Specialty Ingredients**, Suite 400, One North Clematis Street, West Palm Beach, FL 33401 U.S.A.; Telephone: +1.561.248.1852; Fax: +1.561.651.1258; Web: www.dominospecialtyingredients.com; E-mail: lynda.law@asr-group.com. Essential Ingredients for Good Food starts with a strong partnership together with Domino Specialty Ingredients. Our focus is to meeting the global needs of our customers with a comprehensive line of value-added, organic and sweetener solutions, organic rice products, and innovative sugars for pharmaceutical applications. We offer ingredients verified non-GMO.
- 531† DSM Nutritional Products**, 2105 Technology Drive, Schenectady, NY 12308 U.S.A.; Telephone: +1.518.372.5155; Fax: +1.518.372.5599; Web: www.dsm.com; E-mail: jaleen.sherrange@dsm.com. DSM Nutritional Products is the world's premier ingredient supplier and solutions provider to food and beverage manufacturers worldwide. Our extensive product portfolio includes vitamins and minerals, carotenoids for coloration, omega 3 fatty acids, nutraceuticals, and fortification expertise provided by our Fortitech® premixes service. For more information, visit dsm.com or fortitechpremixes.com.
- 431† DuPont Nutrition & Health**, Four New Century Pkwy., New Century, KS 66031-1144 U.S.A.; Telephone: 1.800.255.6837; Telephone 2: +1.913.764.8100; Fax: +1.913.764.5407; Web: www.food.dupont.com. DuPont Nutrition & Health addresses the world's challenges in food by offering a wide range of sustainable, bio-based ingredients and advanced molecular diagnostic solutions to provide safer, healthier, and more nutritious food and beverages.
- 120 Elsevier**, The Boulevard, Langford Lane, Oxford OX5 1GB, United Kingdom; Telephone: + 00 44 1865 843181; Web: www.elsevier.com. Elsevier's Food Science Program features a wide range of journals devoted to the rapid publication of research on all aspects of food science, including food chemistry, food microbiology & safety, food engineering, sensory studies, and food structure, as well as titles focusing on specific areas such as meat, cereals, and dairy.

- 103† Enzyme Development Corporation**, 505 8th Avenue, 15th Floor, New York, NY 10018 U.S.A.; Telephone: +1.212.736.1580; Fax: +1.212.279.0056; Web: www.EnzymeDevelopment.com; E-mail: info@enzymedevelopment.com. EDC is a manufacturer of a wide range of baking enzymes to enhance quality or optimize production. A new botanical-derived proteases is highlighted. Headquarters in New York City with production and labs in Scranton, PA. On-site assistance available. Please contact us.
-
- See our ad on page 60.**
-
- 230 Farmer Direct Foods**, 511 Commercial Street, PO Box 326, Atchison, KS 66002-0326 U.S.A.; Telephone: +1.913.367.4422; Fax: +1.913.367.4443; Web: www.farmerdirectfoods.com; E-mail: sales@farmerdirectfoods.com. Specialists in high-quality, consistent flours made from identity assured white wheats. Natural's Wheat(R) 100% stoneground whole white wheat flours—naturally sweeter taste, lighter colored whole grain flour for breads, breading, and other applications; heavy/clean brans; handcrafters/patent flours available. Waxy white wheat; whole grain and patent. Sauces, breading, and freeze/thaw stabilization.
- 611 Firmenich Inc.**, 250 Plainsboro Road, Plainsboro, NJ 08536 U.S.A.; Telephone: +1.609.580.4317; Fax: +1.609.452.6077; Web: www.firmenich.com; E-mail: terrihegyi@firmenich.com. As a leading flavor supplier, Firmenich's expertise goes beyond taste: it is the sum of our passion, inspiration, and knowledge that allows us to create the best flavors and most innovative technologies for the bakery and cereal market.
- 609†* Florida Food Products**, 2231 W. CR44, Eustis, FL 32726 U.S.A.; Telephone: +1.352.357.4141; Fax: +1.352.357.9375; Web: www.floridafood.com; E-mail: contact@floridafood.com. Florida Food Products (1954) highlights FiberGel LC®: THE single ingredient solution to replace egg/egg-white, whole or in-part. As the world's first FiberColloid™, it can provide emulsification, moisture management, and form thermally stable and irreversible gels....just like egg. There's nothing like FiberGel LC® in the market for bakery food texture.
- 100† FONA International Inc.**, 1900 Averill Road, Geneva, IL 60134 U.S.A.; Telephone: +1.630.578.8600; Fax: +1.630.578.8601; Web: www.fona.com; E-mail: info@fona.com; Facebook: www.facebook.com/FONAInternational. FONA International creates and manufacturers flavors and taste solutions for the world's largest and most innovative food and beverage companies. FONA offers a full range of products and services supporting customers from their starting line to their bottom line.
- 211/ 310† FOSS**, 8091 Wallace Road, Eden Prairie, MN 55344 U.S.A.; Telephone: +1.952.974.9892; Web: www.fossna.com; E-mail: info@fossna.com; Twitter: www.twitter.com/foss_americas. FOSS analytical solutions provide the global standard in grade trading and calibrations based on 30 years of harvest data. We offer highly accurate solutions for all stages from farm to end product. This ensures our customers achieve the highest product consistency and profitability. Analyze protein, moisture, ash, and other parameters.
-
- See our ad on page 79.**
-
- 217† Glanbia Nutritionals Inc.**, Suite 250, 5550 Nobel Drive, Fitchburg, WI 53711 U.S.A.; Telephone: +1.608.316.8500; Telephone 2: 1.800.336.2183; Web: www.glanbianutritionals.com; E-mail: nutrition@glanbia.com. Glanbia Nutritionals' growing pea, chia, flaxseed, and ancient grain portfolio is comprised of sustainable ingredients offering holistic nutrition and/or functionality benefits. Nutritional benefits include protein, fiber, omega 3s, calcium, and more. Functionality benefits include egg replacement, emulsification, moisture management, increased volume, improved texture and crumb structure, and shelf life extension.
- 530† GNT U.S.A., Inc.**, 660 White Plains Road, 6th Floor, Tarrytown, NY 10591 U.S.A.; Telephone: +1.914.524.0600; Web: www.gnt-group.com; E-mail: jobrien@gntusa.com. GNT is the global leader in natural color ingredients made from fruits, vegetables, and edible plants. At AACC 2015, we will have a range of grain-based applications colored naturally with EXBERRY®, such as crackers, chips, and bread. All GNT products are GMO-free, Kosher, and Halal.
- 206† Gold Coast Ingredients Inc.**, 2429 Yates Avenue, Commerce, CA 90040-1917 U.S.A.; Telephone: +1.323.724.8935; Fax: +1.323.724.9354; Web: www.goldcoast.com; E-mail: info@goldcoastinc.com. Gold Coast Ingredients is a privately held, and operated, wholesale flavor and color manufacturer that has been satisfying taste since 1985. Taste us on the web for free online sample ordering @ www.goldcoastinc.com
- 124 Golden Peanut and Tree Nuts**, Suite 400, 100 North Point Center East, Alpharetta, GA 30022 U.S.A.; Telephone: +1.770.752.8195; Web: www.goldenpeanut.com; E-mail: ali.mcdaniel@goldenpeanut.com; Facebook: www.facebook.com/GoldenPeanutCompany. Golden Peanut and Tree Nuts offers a full line of all-natural, plant-based dry and liquid ingredients. From high-protein, low-fat roasted peanut flours to roasted aromatic peanut oils, Golden's specialty products offer the plant-based protein, non-GMO, gluten-free options consumers are looking for while providing the roasted peanut flavor they love!
- 502† Grain Millers, Inc.**, Suite 301, 10400 Viking Drive, Eden Prairie, MN 55317 U.S.A.; Telephone: 1.800.232.6287; Web: grainmillers.com. Grain Millers, Inc. is a leader in the manufacturing of whole-grain ingredients and whole-grain derivatives. We use modern milling technology and state-of-the-art automated systems to manufacture flakes, flours, brans, and fibers. We also offer in-line mixing and blending systems allowing for a high degree of customization of all products.
-
- See our ad on page 13.**
-
- 108† Grain Processing Corporation (GPC)**, 1600 Oregon Street, Muscatine, IA 52761 U.S.A.; Telephone: +1.563.264.4230; Fax: +1.563.264.4287; Web: www.grainprocessing.com; E-mail: food.sales@grainprocessing.com. Quality ingredients for the food industry from Grain Processing Corporation (GPC): MALTRIN® maltodextrins and corn syrup solids, MALTRIN QD® (quick dispersing) maltodextrins and corn syrup solids, PURE-COTE® coating/film-forming starches, INSCOSITY® cold water swelling modified starches, PURE-SET® thin-boiling starches, PURE-GEL® stabilized starches, and PURE-DENT® unmodified and specialty starches.

- 215† Great Plains Analytical Laboratory**, 9503 N. Congress Avenue, Kansas City, MO 64153 U.S.A.; Telephone: +1.303.774.8262; Telephone 2: +1.303.641.1335; Web: www.gpalab.com; E-mail: gstewart@gpalab.com. The leading cereal chemistry laboratory in the United States supplies the industry with a full range of analytical services, including microbiology, nutritional label testing, bake testing, rheology, insect frags, and more. ISO 17025 certified with constantly expanding services and located centrally in the heart of the United States. A global services provider.
-
- See our ad on the inside back cover.**
-
- 117† Hesco LLC**, 500 19th Street SW, Watertown, SD 57201 U.S.A.; Telephone: +1.605.884.1100; Web: www.hesco-inc.com. With one degree of separation from the farm, we are a direct supplier of specialty, non-GMO and organic grains, customized to your specifications. We are non-GMO project verified, certified organic, Kosher, and grade "A" BRC certified. Safe, quality foods start here.
-
- See our ad on page 47.**
-
- 425† ICL Food Specialties**, 622 Emerson Road, Suite 500, St. Louis, MO 63141 U.S.A.; Telephone: +1.314.983.7500; Web: www.iclfood.com; E-mail: foodexperts@icl-group.com. ICL Food Specialties is a global leader in providing ingredient systems that deliver texture and stability to food and beverage products. Our application experts partner with customers to create innovations that satisfy ever-changing industry and consumer trends in the bakery, dairy, meat, and beverage markets.
-
- See our ad on page 5.**
-
- 615 ICOF America**, 9600 Colerain Avenue, Suite 402, Cincinnati, OH 45251 U.S.A.; Telephone: +1.513.791.6813; Web: www.musimmas.com; E-mail: jesse.alexander@icofgroup.com. Musim Mas is a fully integrated palm corporation that operates through the entire palm oil value chain: plantations, milling, and refining to producing value-added products such as bakery fats and emulsifiers. Through our sales subsidiary ICOF, Musim Mas markets and sells to more than 80 countries.
- 116† InfraReady Products Ltd.**, 1438 Fletcher Road, Saskatoon, SK S7M 5T2 Canada; Telephone: +1.306.242.4950; Fax: +1.306.242.4213; Web: www.infrareadyproducts.com; E-mail: info@infrareadyproducts.com. Since 1994, InfraReady Products has been manufacturing cereal grain and pulse ingredients with a focus on convenience, functionality, and flavor using infrared cooking technology. We are BRC, organic, Kosher, and Halal certified. Our brand promise is to provide superior, innovative, and nutritious food ingredients with recognizable consumer benefit.
- 226 Ingredion Inc.**, 5 Westbrook Corporate Center, Westchester, IL 60154 U.S.A.; Telephone: +1.708.551.2600; Web: www.ingredion.com. Ingredion offers nature-based ingredients that deliver sweetness, texture, and nutrition to help food and beverage manufacturers develop new products, reinvigorate hallmark brands, or achieve formulation and manufacturing efficiencies. Our broad portfolio of ingredients and our comprehensive applications development and technical support are key resources to successfully develop and market innovative foods that resonate with consumers.
- 320† Innophos, Inc.**, 259 Prospect Plains Road, Building A, Cranbury, NJ 08512-3717 U.S.A.; Telephone: +1.574.320.0990; Telephone 2: 1.866.631.7394; Web: www.innophos.com; E-mail: customerservice@innophos.com. Innophos Ingredients for Life™ include a complete range of ingredients for leavening and fortification as well as other functional ingredients for grain-based applications. Innophos has developed new leavening options, including the Regal™ family, to meet regulations. Our focus is on innovation and customer solutions to meet market demands.
- 504 International Flavors & Fragrances, Inc.**, 150 Docks Corner Road, Dayton, NJ 08810-0439 U.S.A.; Telephone: +1.732.274.6532; Web: www.iff.com; E-mail: catherine.hogan@iff.com; Facebook: www.facebook.com/InternationalFlavorsandFragrances; Twitter: @IFF. IFF is a leading global creator of flavors and fragrances. Consumers experience these unique scents and tastes in many fine fragrances, household goods, food, and beverages. We leverage our competitive advantages of consumer insight, R&D, creative expertise, and customer intimacy to provide customers with innovative and differentiated product offerings. www.iff.com.
- 419† IOI Loders Croklaan**, 24708 W. Durkee Road, Channahon, IL 60410-5249 U.S.A.; Telephone: +1.815.730.5285; Fax: +1.815.730.5202; Web: www.ioiloders.com. IOI Loders Croklaan is a key global producer of fats and oils servicing the food industry and is the largest provider of replacements for partially hydrogenated oils in the United States. Researching, exploring, and developing new applications for these ingredients for the food, feed, and health industries worldwide has been our business for more than 110 years. Today, IOI Loders Croklaan is dedicated to being an outstanding supplier of palm-based fractions to the food industry around the world.
- 515† J. Rettenmaier U.S.A. LP**, 16369 US Hwy 131 Highway, Schoolcraft, MI 49087-9150 U.S.A.; Telephone: +1.269.679.2340; Telephone 2: 1.877.895.4099; Fax: +1.269.679.2364; Web: www.jrsusa.com; E-mail: info@jrsusa.com. J. Rettenmaier U.S.A., LP is a global leader of functional, label-friendly dietary fibers that contribute nutritional and functional benefits. We're the world's largest manufacturing company for dietary fibers, functional cellulose, starch products, and customized blends. VITACEL®, Canadian Harvest®, and VIVAPUR® insoluble fibers are ideal for fiber enrichment and calorie reduction.

- 518† Kudos Blends**, Old Station Business Park, Cleobury Mortimer, Worcestershire DY14 8SY United Kingdom; Telephone: +44(0)1299 271333; Web: www.kudosblends.com; E-mail: info@kudosblends.com; Twitter: @Kudos-Blends. Continuous scientific focus and innovation at Kudos Blends drives the development of technically driven leavening agents for the bakery industry. The combination of chemistry and baking means that Kudos offers solutions to sodium reduction through patented KUDOS™ potassium bicarbonate, enabling bakers to produce healthier choices for baked goods.
- 207† Lallemand Baking Solutions**, 1620 Prefontaine, Montreal, Quebec H1W 2N8 Canada; Telephone: +1.514.251.3620; Fax: +1.514.255.6861; Web: www.lallemand.com. Lallemand Baking Solutions is the specialty baking ingredients business of Lallemand Inc., the Canadian yeast and bacteria company developing and supplying ESSENTIAL enzyme-based dough conditioners, FERMAID yeast-based dough relaxers, and FLORAPAN baking cultures, as well as customized product solutions to the global baking industry. Ask us, for your clean label needs.
- 112† Malt Products Corporation**, PO Box 898, Saddle Brook, NJ 07663 U.S.A.; Telephone: +1.201.845.4420; Telephone 2: 1.800.526.0180; Fax: +1.201.845.0028; Web: www.maltproducts.com; E-mail: john@maltproducts.com. Your source for natural and organic sweeteners—malt—molasses—agave syrup—tapioca syrup—rice syrup—invert syrup—honey—oat syrup—black malt extract.
- 429† MANE Inc.**, 2501 Henkle Drive, Lebanon, OH 45036 U.S.A.; Telephone: +1.513.248.9876; Fax: +1.513.248.8808; Web: www.mane.com; E-mail: requests@mane.com. MANE's natural flavor expertise, proprietary technology, and customer/consumer-focused approach enables us to customize design for natural and innovative flavors providing cost-effective solutions. From seasonings to sensates, our knowledge, experience, and technology provides a true partnership taking creative concepts to the market shelf.
- 110 Manildra Group USA**, 4210 Shawnee Mission Parkway Suite 312A, Shawnee Mission, KS 66205 U.S.A.; Telephone: +1.630.922.5782; Telephone 2: +1.913.362.0777; Fax: +1.630.922.5783; Web: www.manildrausa.com; E-mail(s): Kbassi@wideopenwest.com skellogg@manildrausa.com. Manildra Group is the leader in manufacturing vital wheat gluten, pregel, native, and modified wheat starches and specialty wheat proteins. Our GemPro line of wheat protein isolates acts dough relaxers and egg replacers for flour-based products. These functional proteins provide benefits for the baking, pasta/noodle, cereal, snack, and nutritional industries. We also produce organic gluten and starches.
- 608† McCormick and Company, Inc.**, 226 Schilling Circle, Hunt Valley, MD 21031 U.S.A.; Telephone: +1.612.875.4382. McCormick is a global leader in flavor. McCormick's Industrial Business partners with multinational food manufacturers, quick service restaurants, and foodservice distributors to create innovative flavor solutions for their brands. McCormick provides high-quality ingredients and exceptional service our partners know they can trust.
- 509/ 511† Medallion Labs**, 9000 Plymouth Avenue N., Minneapolis, MN 55427-3870 U.S.A.; Telephone: 1.800.245.5615; Telephone 2: +1.763.764.4453; Fax: +1.763.764.4010; Web: www.medallionlabs.com; E-mail: info@medlabs.com; Twitter: @MedallionLabs. Since 1974, Medallion Labs, a division of General Mills, has been a leader in analyzing food products. Our expertise includes nutritional analysis, shelf life studies, sensory evaluations, microscopy analysis, technical consulting, and product performance evaluations. The convenience of all these capabilities in one lab makes Medallion the ideal partner.
-
- See our ad on page 50.**
-
- 403 Megazyme**, Bray Business Park, Southern Cross Road, Bray, Wicklow A98Y V29 Ireland; Telephone: +35312861220; Web: www.megazyme.com; E-mail: cs@megazyme.com; Facebook: www.facebook.com/pages/Megazyme-International/279187735558577; Twitter: www.twitter.com/megazyme. Megazyme develops, manufactures, and supplies innovative test kits and reagents for quality management in the cereals, food, wine, and biofuels industries. These kits measure components such as dietary fiber, sugars, organic acids, and enzymes. Recently, Megazyme invested heavily in expanding its molecular biology and synthetic organic chemistry capabilities.
-
- See our ad on page 8.**
-
- 421† The Mennel Milling Company**, P.O. Box 806, Fostoria, OH 44830 U.S.A.; Telephone: 1.800.688.8151; Fax: +1.419.436.5150; Web: www.mennel.com; E-mail: info@mennel.com. Family-owned flour milling company milling soft, hard, and spring wheat flours. We also produce whole wheat, heat treated, and non-chlorinated cake flours. Mills located in Ohio, Michigan, Virginia, and Illinois. Flour can be packaged in 50# bags, totes, and bulk truck and rail.
- 415† MGP Ingredients, Inc.**, 100 Commercial Street, Atchison, KS 66002-2666 U.S.A.; Telephone: 1.866.547.2122; Fax: +1.913.360.5717; Web: www.mgpingredients.com; E-mail: sales@mgpingredients.com. MGP is a leading U.S. producer of specialty wheat proteins and starches, providing non-GMO solutions that aid food manufactures in fiber enhancement, protein enrichment, and egg replacement for a wide range of applications. These ingredients additionally possess outstanding taste and textural qualities and offer exceptional formulation and processing ease.
- 605 Mid-America Food Sales Ltd.**, PO Box 904, Northbrook, IL 60065-0904 U.S.A.; Telephone: +1.847.945.0104; Fax: +1.847.945.0424; Web: www.midamfoodsales.com; E-mail: mafs00@ameritech.net. Mid America Food Sales Ltd. is an international food ingredient, marketing, and consulting company. We provide solutions to the food and nutritional industry. Our focus is fiber, grains, custom blending, packaging, dairy and bar inclusions, dairy proteins, pea, potato, rice proteins, cereal and cookie inclusions, prebiotic and probiotic ingredients, gluten-free ingredients, sprouted grains, ancient grains breadings, Nadna Nuts, Wheat Nuts, sweeteners, sun flower lecithin.

517† NEXIRA, 15 Somerset Street, Somerville, NJ 08876 U.S.A.; Telephone: 1.800.872.1850; Fax: +1.908.707.9405; Web: www.nexira.com; E-mail: info-usa@nexira.com. Nexira is a global leader in natural ingredients and botanical extracts for food, nutrition, and dietary supplements. Nexira built its reputation as the world leader in acacia gum and now manufactures a wide range of ingredients, antioxidants, and active botanicals for weight management, sports nutrition, and digestive and cardiovascular health.

524† Northern Crops Institute, NDSU Dept. 7400, P.O. Box 6050, Fargo, ND 58108-6050 U.S.A.; Telephone: +1.701.231.7736; Fax: +1.701.231.7235; Web: www.northern-crops.com; E-mail: nci@ndsu.edu; Facebook: www.facebook.com/northerncropsinstitute. NCI is a collaborative effort between North Dakota, South Dakota, Minnesota, and Montana to support the promotion and market development of the crops grown in the region. NCI is an international learning center for customers, commodity traders, technical experts, and processors for discussion, education, and technical services.

104† NP Analytical Laboratories, 1 Checkerboard Square, St. Louis, MO 63164 U.S.A.; Telephone: 1.800.423.6832; Telephone 2: +1.314.982.1310; Fax: +1.314.982.1078; Web: www.npal.com; E-mail: npal@purina.com. NP Analytical Laboratories provides comprehensive testing of foods and ingredients for nutrients, contaminants, microbial pathogens, and quality indicators. Services include measurement of vitamins, minerals, dietary fiber, fatty acids, sugars, amino acids, preservatives, fat quality and stability, pesticides, mycotoxins, and complete nutrition labeling services. Microbial shelf-life and challenge studies also offered.

[See our ad on page 21.](#)

228 Nutraceuticals World, 70 Hilltop Road, Suite 3000, Ramsey, NJ 07446-1155 U.S.A.; Telephone: +1.201.825.2231; Fax: +1.201.825.0553; Web: www.nutraceuticalsworld.com; E-mail: slipscomb@rodmanmedia.com. Nutraceuticals World is the premier international magazine serving manufacturers of functional foods, sports and nutritional beverages, and dietary supplements, providing valuable information on marketing trends, ingredient sourcing, packaging, and manufacturing equipment. Nutraceuticals World is an important resource for industry executives worldwide. NutraceuticalsWorld.com offers exclusive online articles. NutraceuticalsWorldNow offers timely industry news.

219 PacMoore Products, Inc., 1844 Summer Street, Hammond, IN 46320 U.S.A.; Telephone: +1.219.228.7703; Web: www.pacmoore.com; E-mail: solutions@pacmoore.com; Facebook: www.facebook.com/pacmooreproducts; Twitter: @pacmoore. PacMoore's extrusion, blending, spray drying, sifting, repacking, and consumer packaging capabilities meet virtually any food standard, including organic, gluten-free, Kosher, Halal, and non-GMO. PacMoore has two BRC A-rated production facilities in Indiana and a new PacMoore Innovation Lab for extrusion product development in Gridley, IL. Visitors are always welcome.

600† Palsgaard Incorporated, 101 Gibraltar Drive, Suite 2B, Morris Plains, NJ 07950 U.S.A.; Telephone: +1.973.998.7951; Fax: +1.973.998.7953; Web: www.palsgaard.com; E-mail: direct@us.palsgaard.com. Palsgaard developed the world's first commercial emulsifier a century ago—and we haven't stopped inventing since. We not only develop new emulsifiers or emulsifier/stabilizer solutions, we also help food manufacturers make the most of them in their products within: bakery, confectionery, ice cream, margarine, mayonnaise, and dressings.

[See our ad on page 37.](#)

225/324† Perten Instruments AB, PO Box 5101, Kungens Kurva, SE-141 05 Sweden; Telephone: +1.217.585.9440; Fax: 46 8 881 210; E-mail: arork@perten.com; Web: www.perten.com. Instruments and analyzers for cereal chemists. Test and measure physical, chemical, and rheological properties of grains, ingredients, and finished products. Speak with our experts to discuss your particular analysis needs.

[See our ad on page 1.](#)

225/324† Perten Instruments, 6444 South 6th Street Road, Springfield, IL 62712 U.S.A.; Telephone: +1.217.585.9440; Fax: +1.217.585.9441; Web: www.perten.com. NEW instruments and applications—Falling Number 1000 from the method originator, SRC Bundle, the DA 7440 over-belt NIR analysis system, connectivity software, and more.

[See our ad on page 1.](#)

407 Prayon, 1610 Marvin Griffin Road, Augusta, GA 30906 U.S.A.; Telephone: +1.706.771.3415; Fax: +1.706.771.9390; Web: www.prayon.com; E-mail: customerservice@prayon-inc.com. Prayon is a leading global producer of food-grade phosphates and phosphoric acid, having three European manufacturing facilities and a manufacturing and commercial operations site in Georgia. Prayon supplies a broad range of high-performance food-grade phosphates to the baking, meat, seafood, dairy, and beverage markets around the world.

227 QualiTech, Inc., 318 Lake Hazeltine Drive, Chaska, MN 55318 U.S.A.; Telephone: +1.952.448.5151; Web: www.qualitechco.com; Facebook: www.facebook.com/Qualitechco; Twitter: www.twitter.com/QualiTechCo. QualiTech has been providing innovative nutrition solutions for over 40 years. We're passionate about developing creative solutions—inclusions and particulates—that offer great flavor, texture, function, and visual appeal to your proprietary products. They also serve as delivery systems for unique ingredients such as omega-3s, fiber, fruit content, nutraceuticals, and proteins.

630†* QualySense AG, Uberlandstrasse 2A, Glattbrugg, 8152 Switzerland; Telephone: +41 44 824 35 89; E-mail: iva.cerna@qualysense.com. QualySense produces the QSorter Explorer, an artificial intelligence robot for high-speed sorting of grains. The QSorter Explorer analyzes quality of each grain and sorts it according to its biochemical properties and physical traits. The technology combines machine vision with NIR spectroscopy, and thus enhances significantly the accuracy of sorting algorithms.

- 603† Radio Frequency Co., Inc.**, 150 Dover Road, Millis, MA 2054 U.S.A.; Telephone: +1.508.376.9555; Fax: +1.508.376.9944; Web: www.macrowave.com; E-mail: tclark@radiofrequency.com. Radio Frequency is promoting its new Ultra-Series Macrowave™ pasteurization system designed for food safety and easy sanitation. Systems assure uniform volumetric product heating conveyed in bulk or bags. This rapid heating achieves up to a 5log reduction of pathogens without adversely affecting the protein functionality. Available from 1,000 lbs/h to 50,000 lbs/h.
- 306† R-Biopharm, Inc.**, 870 Vossbrink Drive, Washington, MO 63090 U.S.A.; Telephone: 1.877.789.3033; Fax: 1.866.922.5856; Web: www.r-biopharm.com; E-mail: sales@r-biopharm.com; Twitter: @Rbiopharm. R-Biopharm specializes in diagnostic test kits for the food and feed industry. We offer the most validated test kit for gluten analysis as well as the largest portfolio of food allergen test kits commercially available. Our catalog includes test kits for vitamin analysis, mycotoxins, GMO analysis, hormones, antibiotics, and microbiology.
- 127† Research Products, Company**, PO Box 1460, 1835 E North St., Salina, KS 67402-1460 U.S.A.; Telephone: +1.785.825.2181; Fax: +1.785.825.8908; Web: www.researchprod.com; E-mail: info@researchprod.com. Since 1946, Research Products Company has provided the milling and baking industries with innovative ideas, services, and products second to none. We've supplied the industry with vitamin and mineral premixes, standard-setting flour oxidation and maturing services, micro-ingredient dispensing systems, and on-site field servicing.
- 216 Revtech**, PA Champgrand, 50 allée des Abricotiers, Lorient sur Drôme 26270 France; Telephone: +33 4 75 60 16 33; Web: www.revtech-process-systems.com; E-mail: revtech@revtech.fr. Revtech designs continuous units for the heat treatment of cereal products. Units from 500 to 10,000 lbs/h can be used for various applications: drying—pasteurizing—stabilizing—toasting—heat treating flour to modify properties. Same machine can be used for flour, bran, germs, flakes, and grains.
- 614† Richardson Milling**, 2800 One Lombard Place, Winnipeg MB R3B 0X8 Canada; Telephone: 1.800.663.6287; Telephone 2: 1.877.984.7246; Web: www.richardson.ca; E-mail: millinginfo@richardson.ca. Richardson Milling offers a broad range of whole grain oat ingredients, including oat groats, flakes, flour, and bran, as well as innovative coated whole grains and granola clusters. Our value-added flaked and expanded whole grain-based ingredients are designed to be an integral component in your products.
-
- See our ad on page 32.**
-
- 114 Roha USA**, 5015 Manchester Ave., St. Louis, MO 63110 U.S.A.; Telephone: 1.888.533.7642; E-mail: roha.usa@rohagroup.com. ROHA specializes in color ingredients that enhance the visual palatability of foods and beverages. Leading global food and beverage manufacturers rely on us because we provide: both natural and artificial colors, improved profitability through supplier and raw material consolidation, direct access to an expert R&D team dedicated to colors.
- 619 Sensient Food Colors**, 2515 N Jefferson Ave., Saint Louis, MO 63106 U.S.A.; Telephone: +1.314.889.7600; Web: www.sensientfoodcolors.com/colorinsight; E-mail: cory.gegg@sensient.com. Sensient provides a broad portfolio of customized, application-ready color solutions to the food industry. Sensient delivers leading edge natural color innovation that harnesses nature's true colors to continuously improve shade range, stability, and natural color economics. All of Sensient's natural color solutions are backed by our CertasureSM turn-key certification program.
- 520† Sensus America, Inc.**, 100 Lenox Drive, Suite 104, Lawrenceville, NJ 08648 U.S.A.; Telephone: +1.646.452.6140; Telephone 2: +1.646.452.6143; Fax: +1.646.452.6150; Web: www.inspiredbyinulin.com; E-mail: contact@sensus.us. Sensus America is a leading manufacturer of chicory root fiber ingredients. These products possess a unique range of functional properties that can improve taste and texture in a wide range of applications. Our recent introduction from Sensus, Frutalose[®] SFP, is a particularly effective sugar replacer.
- 409 Siemer Specialty Ingredients**, 201 W. Main Street, Teutopolis, IL 62467 U.S.A.; Telephone: +1.217.857.2231; Telephone 2: +1.217.857.3131; Fax: +1.217.857.3092; Web: www.siemersi.com; E-mail: rferguson@siemermilling.com. Naturally replace modified food starch at a cost-effective price point. Heat-treated flour for food safety. Improve nutritional value without compromising shelf life with stabilized wheat germ/bran. Create a natural cake that is bleach-free but retains the functionality of bleached cake. Stop by to learn more!!
- 521 Solvaira Specialties**, 50 Bridge Street, North Tonawanda, NY 14120 U.S.A.; Telephone: +1.716.693.4040; Fax: +1.716.693.3568; Web: www.solvaira.com; E-mail: info@solvaira.com. Fibred-Maryland, Allied Blending & Ingredients, and International Fiber Corporation have shared a commitment to excellence and innovation for many years. Now, as Solvaira Specialties, we bring you a wide range of high-quality ingredient solutions for your baking applications. Join us and discover how we can work for you.
- 621 Sosland Publishing Company**, 4801 Main Street, Suite 650, Kansas City, MO 64112; U.S.A.; Telephone: +1.816.756.1000; Web: www.sosland.com; Email: sales@sosland.com. For over 90 years thousands of food industry professionals have relied on Sosland Publishing Co.'s print and digital information resources. Sosland is the proud publisher of Milling & Baking News, Food Business News, Baking&Snack and World Grain as well as their respective websites, www.bakingbusiness.com, www.foodbusinessnews.net, and www.world-grain.com.
- 205 SPEX SamplePrep**, 65 Liberty Street, Metuchen, NJ 08840 U.S.A.; Telephone: +1.732.623.0490; Web: www.spexsampleprep.com; E-mail: sampleprep@spex.com; Twitter: www.twitter.com/sampleprep. SPEX SamplePrep has provided superior sample preparation equipment since 1954. Our 2010 Geno/Grinder[®] is a high-throughput plant tissue homogenizer and our Freezer/Mill[®] is a powerful cryogenic mill that grinds tough samples frozen in liquid nitrogen. These innovative products extract DNA/RNA from plant tissues while preserving the sample's integrity.

304† SunOpta, Inc., 7301 Ohms Lane, Edina, MN 55439 U.S.A.; Telephone: +1.218.281.2985; Web: www.sunopta.com/ingredients. SunOpta adds value to our non-GMO and organic raw materials to produce high quality ingredients for food manufacturers. Included in the portfolio are organic and non-GMO grain-based, soy, and sunflower ingredients. (www.sunopta.com)

616 Suntava, Inc., 3290 S. St. Croix Trail, Suite 1, #527, Afton, MN 55001 U.S.A.; Telephone: +1.651.998.0723; Telephone 2: +1.805.689.6548; Fax: +1.612.435.0264; Web: www.suntavapurplecorn.com; E-mail: info@suntava.com; Facebook: www.facebook.com/SuntavaPurpleCorn; Twitter: www.twitter.com/gopurplecorn. Suntava, Inc. is a Minnesota-based agricultural company focused on researching and growing better-for-you crops. Our flagship product is Suntava purple corn, a nutrient-dense, high-antioxidant, non-GMO project verified, gluten-free super food providing more than twice the antioxidant activity as blueberries. Organic purple corn is also available.

107† Symrise Inc., 300 North Street, Teterboro, NJ 07608-1204 U.S.A.; Telephone: +1.201.288.3200; Web: www.symrise.com; Twitter: @SymriseNA. Symrise has an outstanding reputation for high quality vanilla, citrus, mint, tropical, fruit and dairy flavors. By combining technical expertise with marketing insights, Symrise offers natural, healthy and exciting taste solutions for cereal manufacturers in standard varieties as well as custom created cereal flavors to support new product development.

308† Texture Technologies Corp., 6 Patton Drive, Hamilton, MA 01982-1924 U.S.A.; Telephone: +1.914.472.0531; Fax: +1.914.472.0532; Web: www.texturetechnologies.com; E-mail: awass@texturetechnologies.com, marcj@texturetechnologies.com. Texture Technologies is the North American distributor of the Stable Micro Systems TA.XT family of texture analyzers and the Volscan volume analyzer. Our instruments are used extensively throughout the food industry. R&D and QC labs rely on their accuracy and durability as well as our expert customer service.

514 Thymly Products, Inc., 1332 Colora Road, PO Box 65, Colora, MD 21917-0065 U.S.A.; Telephone: +1.302.658.4820; Fax: +1.302.220.0038; Web: www.thymlyproducts.com; E-mail: marketing@thymlyproducts.com; Facebook: www.facebook.com/thymlyproductsinc; Twitter: www.twitter.com/thymlyproducts. Thymly Products, Inc. has been manufacturing dry food ingredients since 1967. With our R&D department, we can perform bake test and product comparisons to save you time and money, and/or provide technical assistance via a site visit or assist you over the phone with any baking or manufacturing questions.

411† Tree Top Fruit Ingredients, 220 E. 2nd Street, PO Box 248, Selah, WA 98942 U.S.A.; Telephone: +1.509.698.1435; Telephone 2: 1.800.367.6571, ext. 1435; Fax: +1.509.698.1409; Web: www.treetoppingredients.com; E-mail: jeannie.swedberg@treetop.com. Tree Top has one of the most comprehensive portfolios of fruit offerings available in the market today. In fact, we offer more fruits in more forms than any other supplier. Our portfolio includes fruit powders, frozen fruit, specialty fruit juice concentrates, fruit purées, formulated fruit preps, and bulk dried apples.

See our ad on page 35.

314 VICAM, A Waters Business, 34 Maple Street, Milford, MA 01757 U.S.A.; Telephone: +1.508.482.4935; Web: www.vicam.com; E-mail: vicam@vicam.com. VICAM, A Waters Business, is dedicated to developing rapid diagnostics for the detection of aflatoxin, ochratoxin, and other mycotoxins in food, botanical, and agricultural products. Trusted in more than 100 countries to ensure food safety, VICAM products are AOAC and USDA approved. Contact us today: +1.508.482.4935, vicam@vicam.com, or visit www.vicam.com.

610† Wenger Manufacturing, Inc., 714 Main Street, Sabetha, KS 66534 U.S.A.; Telephone: +1.785.284.2133; Fax: +1.785.284.3771; Web: www.wenger.com; E-mail: mle@wenger.com. Wenger's one source advantage for cereal and snack production. As the pioneer in extrusion cooking systems, Wenger continues to guide the industry with unique designs and new innovations. As the leading manufacturer of single and twin-screw extruders, we can provide the extruder that is best suited for your needs.

See our ad on the back cover.

Our Science, Our Future

Deborah Rogers, 2011 AACCI President

"The world of cereal grain science is getting more exciting each year. With the rising of such issues as clean labels, healthy products, gluten-free, and ancient grains we have many opportunities to expand our knowledge and to apply that knowledge. Life is not boring!"

Numerical Listing of Exhibitors

BOLD type indicates an advertising company. Page numbers for advertisers are listed in the Advertisers Index on page 86.

100	FONA International Inc.	403	Megazyme
102	Buhler	405	CPM Wolverine Proctor LLC
103	Enzyme Development Corporation	407	Prayon Inc
104	NP Analytical Laboratories	409	Siemer Specialty Ingredients
105	Bay State Milling Company	411	Tree Top Fruit Ingredients
106	ANKOM Technology	415	MGP Ingredients, Inc
107	Symrise Inc	417	Bepex International LLC
108	Grain Processing Corporation (GPC)	419	IOI Loders Croklaan
110	Manildra Group USA	421	The Mennel Milling Company
112	Malt Products Corporation	425	ICL Food Specialties
114	Roha USA LLC	427	Brookfield Engineering Laboratories USA
115/214	Almond Board of California	429	MANE Inc.
116	InfraReady Products Ltd	431	DuPont Nutrition & Health
117	Hesco, LLC	501/503	CHOPIN Technologies
118	BI Nutraceuticals	502	Grain Millers, Inc.
119	Dakota Specialty Milling Inc	504	International Flavors & Fragrances, Inc.
120	Elsevier	506	Cereal Ingredients Inc
122	ADM	508	American Proficiency Institute
124	Golden Peanut and Tree Nuts	509/511	Medallion Labs
126	ADM/Matsutani LLC	510	Blue Diamond Growers
127	Research Products Company	514	Thymly Products, Inc.
202/204	Ardent Mills	515	J Rettenmaier USA LP
203/302	Brabender GmbH & Co KG	516	Clasen Quality Coatings, Inc.
203/302	C W Brabender Instruments Inc	517	NEXIRA
205	SPEX SamplePrep	518	Kudos Blends
206	Gold Coast Ingredients Inc	519	CE Elantech, Inc.
207	Lallemand Baking Solutions	520	Sensus America, Inc.
209	Best Cooking Pulses Inc	521	Solvaira Specialties
211/310	FOSS	524	Northern Crops Institute
215	Great Plains Analytical Laboratory	526	Bratney Companies
216	REVTECH	528	Bastak Gida Mak Med
217	Glanbia Nutritionals Inc.	530	GNT USA, Inc.
218	Carl Zeiss Microscopy GmbH	531	DSM Nutritional Products
219	PacMoore Products Inc	600	Palsgaard Incorporated
221	Carmi Flavor & Fragrance Inc	602	Canadian International Grains Institute
225/324	Perten Instruments AB	603	Radio Frequency Co., Inc.
225/324	Perten Instruments Inc.	605	Mid-America Food Sales Ltd
226	Ingredion Inc.	607	BENEO Inc
227	QualiTech, Inc.	608	McCormick & Company, Inc.
228	Nutraceuticals World	609	Florida Food Products
229	Baker Perkins	610	Wenger Manufacturing, Inc.
230	Farmer Direct Foods	611	Firmenich Inc
231	David Michael & Co.	613	Brolite Products Inc.
304	SunOpta, Inc.	614	Richardson Milling
306	R-Biopharm, Inc	615	ICOF America
308	Texture Technologies Corp.	616	Suntava, Inc.
314	VICAM, A Waters Business	617	Cain Food Industries, Inc.
316	California Natural Products	618	Corbion Caravan
318	Church & Dwight Co Inc	619	Sensient Food Colors
320	Innophos, Inc.	620	Budenheim USA Inc
326	C-Cell by Calibre	621	Sosland Publishing Company
330	Domino Specialty Ingredients	630	QualySense AG

FOSS

LEADERS IN GRAIN TESTING FOR 60 YEARS



Infratec™ NOVA

- Unmatched excellence in grain analysis
- 30% Smaller. 20% Faster. 100% Connected

Alphatec™ FN²

- Taking on the demands of modern grain testing
- A new alternative from FOSS to perform the standard falling number test for sprouting damage in grain and enzyme activity in flour

Proud Sponsor of:



Learn More at
Tables 310 & 211!

Dedicated Analytical Solutions
www.fossna.com/grain

2016 AACCI Annual Meeting

October 23 - 26
Savannah, Georgia, U.S.A.

Contribute to THE meeting
on cereal grain science.

Call for Abstracts
March 1 - April 15, 2016



aacnet.org/meet

AUTHOR INDEX

The number following each name refers to the Presentation number in the Program Book. The Letter following each abstract refers to the type of presentation, P = poster, S=symposium.

- Abbas, H. K., (45-P)
Abbasi Parizad, P., (150-P)
Abdelaal, E., (16-P)
ACAR, O., (65-P)
Adhikari, B., (195-P)
Agah, S., (226-P)
Agama-Acevedo, E., (201-P)
Ahmad, A., (24-P)
Ai, Y., (98-P), (115-P), (132-P)
Aktas, E., (109-P)
Alavi, S., (47-S), (51-S), (52-O), (94-P), (96-P), (175-P)
Al-Fadly, M., (24-O)
Ali, A., (93-P)
Aliani, M., (165-P)
Alvaranega, A., (162-P)
Aman, P. B., (21-O)
Amann, A. A., (1-O)
Ambrose, K., (96-P), (142-P), (181-P)
Ames, N., (18-S), (20-S), (48-O)
Amoako, D. B., (46-S)
Amorim, R., (162-P)
Ando, H., (140-P)
Angalet, S., (102-P)
Angermayer, M., (9-P), (154-P)
Annor, G., (4-S), (51-P), (209-P)
Arámbula Villa, G., (54-P)
Arijaje, E. O., (218-P)
Arioglu Tuncil, S., (180-P)
Aritan, S., (11-O), (71-P)
Ariyama, K., (46-P)
Arntfield, S., (129-P), (165-P), (227-P), (228-P)
Arte, E., (27-O), (37-P)
Assirati, J., (162-P)
Atungulu, G., (72-S), (16-O)
Atunguu, G. G., (72-S)
Augst, E., (128-P)
Avramenko, N. A., (79-P), (80-P)
Awika, J., (46-S), (67-S), (69-S), (120-P), (226-P)
Ayala-Soto, F. E., (221-P)
Baasandorj, T., (139-P)
Baik, B. K., (24-P), (64-P), (84-P), (101-P), (136-P)
Bakke, M., (7-P)
Bala, S. M., (197-P)
Balakrishnan, G., (235-P)
Bao, J. S., (75-S), (93-P)
Barbiroli, A., (73-S), (5-P)
Barnard, C., (146-P)
Bason, M., (12-O), (68-P)
Basu, R., (143-P)
Bauer, L. L., (23-O)
Bazin, S., (42-P)
Bedford, M., (26-O)
Bellaloui, N., (45-P)
Bello-Perez, L. A., (193-P), (203-P)
Beloshapka, A. N., (23-O)
Below, F., (173-P)
Benedetti, S., (5-P)
Berbezy, P., (223-P)
Berra, M., (35-P)
Bertoft, E., (2-S), (4-S), (51-P), (209-P)
Beta, T., (75-S), (7-O), (29-O), (131-P), (227-P), (228-P)
Bettge, A., (155-P)
Bezner-Kerr, R., (227-P), (228-P)
Bianchini, A., (37-S), (134-P)
Bindels, L., (231-P)
Bird, A., (223-P)
Blanchard, C., (82-P)
Blennow, A., (31-O), (57-P), (172-P), (206-P), (209-P)
Blumberg, J. B., (40-S)
Blundell, M. J., (37-O)
Boatwright, M. D., (20-O)
Bock, J. E., (214-P)
Bonomi, F., (73-S), (125-P), (150-P)
Book, S. L., (19-O)
Boonna, S., (196-P)
Bosc-Bierne, L., (17-P), (112-P)
Bourre, L., (42-S)
Bourré, L., (114-P)
Boux, G., (152-P)
Bowman, M. J., (23-O)
Boyd, L., (20-S)
Brackebusch, K., (9-P)
Brahma, S., (61-P)
Brijs, K., (42-O), (69-P)
Broegger, A. F., (5-O)
Bruns, H. A., (45-P)
Buléon, A., (210-P)
Bunzel, D., (54-S), (47-O), (47-O), (20-P), (85-P), (219-P)
Buratti, S., (5-P)
Byars, J. A., (110-P), (121-P)
Cabas-Luhmann, P., (41-P)
Cadena-Chamorro, E. M., (10-P)
Cai, L., (101-P)
Calderón de la Barca, A., (216-P)
Campanella, O., (198-P), (202-P)
Cao, W., (214-P)
Carpen, A., (150-P)
Carrillo-Inugaray, M. L., (203-P)
Carter, C., (140-P)
Casper, L. M., (21-S)
Cato, L., (77-S), (76-P)
Chacko, S. K., (60-P)
Chang, W. S., (126-P), (126-P), (147-P)
Chao, Y. H., (25-P)
Chapron, S., (223-P)
Chauhan, F., (4-S)
Chaunier, L., (4-O), (100-P)
Chavez-Santoscoy, R. A., (236-P)
Chen, L., (58-S), (8-O), (23-O), (56-P), (93-P), (99-P), (165-P), (171-P), (173-P), (224-P), (230-P), (234-P)
chen, Z., (86-P)
Cheng, R., (49-O)
Chessa, S., (57-P)
Chevallier, S., (13-O), (105-P)
Chew Guevara, A. A., (118-P)
Chibbar, R. N., (49-P)
Chin, C. C., (82-P)
Chiremba, C., (123-P)
Chiron, H., (100-P)
Cho, C. Y., (49-O)
Choi, I., (101-P)
Chu, Y., (222-P)
Cichy, K., (98-P)
Cisse, F., (59-P)
Cockburn, D., (31-O)
Coda, R., (27-O), (37-P)
Cogswell, T., (26-S)
Colgrave, M. L., (37-O)
Constantinescu, S., (41-O)
Copeland, L., (24-O)
Cortes-Rodriguez, M., (148-P)
Cortez Rocha, M. O., (31-P)
Costello, D., (14-S)
Cotta, M. A., (23-O), (55-O)
Courtin, C. M., (56-S)
Cox, S., (128-P)
Cropper, S., (3-P), (185-P)
Crosbie, G. B., (77-S)
Cuavain, S., (76-P)
Curran, J. M., (44-S)
D'Amico, S., (117-P)
Dang, J., (68-P)
Dann, O., (154-P)
Daugelaite, D., (38-P), (39-P)
David, C., (90-P)
De Brier, N., (9-O)
de Francisco, A., (34-O)
de Mejia, E., (56-O), (141-P)
Delcour, J. A., (3-S), (9-O), (39-O), (42-O), (69-P)
Deleu, L. J., (42-O)
Della Valle, G., (4-O), (90-P), (100-P)
Dell'Endice, F., (22-S), (22-S)
Delorme, T., (48-P)
Delwiche, S. R., (30-S)
Demeke, T., (27-P)
Demiate, I. M., (6-P)
Deng, L., (135-P), (144-P)
Dhital, S., (30-P)
Di Martino, M., (57-P)
Di, W., (8-O), (230-P)
Dien, B., (23-O), (55-O)
Ding, J., (35-S)
Dogan, H., (185-P)
Donner, E., (9-O)
dos Santos, I. R., (34-O)
Doucet, J., (106-P)
Draga, A., (51-O)
Du, J., (57-S)
Dubat, A., (35-P), (138-P)
Dubois, T., (19-P)
Dunn, M. L., (133-P)
Duodu, G., (71-S)
Dupuis, B., (62-P), (83-P)
Dura, A., (153-P)

- Duvarci, O., (38-O)
 Dykes, L., (139-P)
 Eck, P., (29-O)
 Elias, E., (21-P), (41-P)
 Eng, M., (27-P)
 Erdman, J. W., (39-S)
 Erickson, D. P., (59-P)
 Escalante Aburto, A., (31-P), (32-P)
 Espinosa-Solis, V., (203-P)
 Estrada Flores, V. S., (2-P)
 Fahey, G. C., (23-O)
 Fajardo, C., (212-P)
 Fan, G., (4-S), (228-P)
 Fang, F., (174-P), (202-P)
 Fanta, G. F., (122-P)
 Faoro, F., (67-P)
 Faubion, J., (34-O), (3-P), (185-P)
 Feldpausch, M., (3-P)
 Felker, F. C., (122-P)
 Feng, G., (35-S), (33-O), (33-O), (170-P), (225-P)
 Fiedler, K. L., (49-O)
 Figureoa Cárdenas, J. d., (31-P), (32-P), (54-P), (75-P), (207-P)
 Finkenstadt, V. L., (122-P)
 Fischer, P., (10-O)
 Flanagan, B., (28-P)
 Flores, R., (134-P)
 Fort, E., (9-P)
 Fu, B. X., (62-P), (83-P), (123-P)
 Fudge, J. R., (133-P)
 Fuerst, P. E., (3-O)
 Fujiwara, N., (55-P)
 Fulcher, R. G., (131-P)
 Gabriel, S., (2-O)
 GAMEL, T., (19-S)
 Gangola, M., (49-P)
 Ganjyal, G., (61-S), (41-O)
 Gao, Q., (195-P)
 Garber, E. A., (49-O)
 García Villanueva, C., (2-P)
 Garland-Campbell, K., (25-S)
 Garretson, L., (168-P)
 Gayin, J., (4-S)
 Gaytán-Martínez, M., (207-P)
 Gentry, L., (173-P)
 George, J., (34-S)
 Gidley, M. J., (25-O), (45-O), (28-P), (30-P), (182-P)
 Gilbert, R., (25-O), (50-P), (208-P)
 Giosafatto, V., (172-P)
 Girard, A. L., (120-P)
 Gobetti, M., (45-S)
 Goldstein, A., (4-S), (209-P)
 Gomand, S. V., (9-O)
 Gómez, M., (28-O), (15-P)
 Gomez-Esparza, A., (203-P)
 Gonzalez Conde, A. I., (130-P)
 Goswami, H., (37-O)
 Gough, K. M., (40-P)
 Grace, T., (66-S)
 Graf, R., (15-O), (70-P)
 Graham-Acquaah, S., (119-P)
 Gras, F., (112-P)
 Grimm, C. C., (74-S)
 Grusak, M. A., (11-S)
 Gu, F., (195-P)
 Guan, B., (50-O)
 Guessasma, S., (4-O)
 Gulati, P., (32-O), (91-P)
 Gunness, P., (182-P)
 Gunnnett, C., (57-S)
 Guo, Q., (47-S)
 Gutierrez-Uribe, J., (221-P), (236-P)
 Haas-Lauterbach, S., (19-P)
 Hagan, L., (119-P)
 Hakala, T., (108-P), (109-P)
 Hall, C., (55-P), (113-P)
 Hamaker, B., (5-S), (16-S), (46-O), (58-P), (59-P), (198-P), (202-P), (224-P), (233-P), (234-P)
 Hammers, A., (15-S)
 Han, F., (8-O), (230-P)
 Hansen, R., (36-S)
 Harte, J. B., (98-P)
 Hasjim, J., (229-P)
 Hatcher, D. W., (38-P), (39-P)
 Haydon, K., (160-P)
 Hayes, A. M., (59-P)
 Haynes, L., (2-O)
 Hays, D. B., (69-S)
 He, X., (56-P), (188-P)
 Hebelstrup, K., (57-P), (172-P), (209-P)
 Hedjazi, L., (4-O)
 Heidolph, B. B., (52-S)
 Heiniö, R. L., (108-P)
 Heredia Olea, E., (118-P)
 Heredia-Sandoval, N., (216-P)
 Hernández Reyes, K. E., (2-P), (118-P)
 Hernández-Estrada, Z. J., (32-P), (75-P), (107-P)
 Herrera-Gomez, O., (2-O)
 Herrman, T. J., (47-P), (145-P)
 Hesso, N., (13-O), (200-P)
 Hildebrand, A., (47-O)
 Hill, S., (5-O), (26-O)
 Hillen, C., (113-P)
 Hoffpauer, D., (187-P)
 Hojilla-Evangelista, M. P., (213-P)
 Holigroski, M., (27-P)
 Holley, R., (20-S)
 Hoover, R., (50-S)
 Hopkins, E. J., (77-P), (124-P)
 Hornback, K., (122-P)
 Hou, A., (78-S), (19-O), (88-P), (155-P), (170-P), (183-P), (215-P), (225-P)
 House, J. D., (41-S)
 Howitt, C., (18-O), (37-O)
 Hoyos-Leyva, J. D., (193-P)
 Hu, J., (73-P), (74-P), (88-P), (89-P), (215-P)
 Huang, C., (56-O), (49-P), (56-P), (156-P), (170-P), (173-P), (225-P)
 Huber, K. C., (25-P)
 Huch, M., (47-O)
 Hucl, P., (16-P), (77-P), (78-P), (79-P), (80-P), (124-P), (192-P)
 Hurburgh, C., (23-P), (29-P), (44-P), (177-P)
 Hwang, T., (227-P)
 Iametti, S., (73-S), (5-P), (150-P)
 Ihalainen, P., (37-P)
 Inokuma, T., (43-O)
 Irani, M., (16-P)
 Isaak, C., (70-P)
 Ishida, Y., (46-P)
 Islas-Rubio, A., (216-P)
 Iten, L. B., (23-O)
 Ito, N., (36-P)
 Izdorczyk, M., (50-S)
 Izydorczyk, M., (21-S), (42-P)
 Jackson, D. S., (199-P)
 Jane, J. L., (6-P), (176-P), (211-P)
 Ji, T., (84-P), (99-P)
 Jiang, Y., (73-P), (74-P)
 Jiménez Sandoval, S. J., (54-P)
 Jin, H., (50-O), (115-P), (132-P)
 Jordan, D., (23-S)
 Joseph, M., (47-S)
 Joyner, H., (41-O)
 Kaka, A., (43-P)
 Kalinga, D., (4-S)
 Kao, W. T., (126-P), (147-P)
 Karrer, C., (47-O)
 Katina, K., (22-O), (27-O), (27-O), (37-P)
 Katundu, M., (227-P), (228-P)
 Kaukovirta-Norja, A., (109-P)
 Kaur Chandhi, G., (63-P)
 Kawasaki, A., (46-P)
 Kelly, J. D., (98-P), (115-P)
 Kenar, J. A., (121-P)
 Keshavarzian, A., (234-P)
 Keys, S., (107-P)
 Khalid, K. H., (144-P), (149-P), (171-P)
 Kiatponglar, W., (210-P)
 Kidd, M., (197-P)
 Kim, H. Y., (143-P), (176-P), (179-P), (226-P)
 Kirkensgaard, J., (172-P), (209-P)
 Kiszonas, A. M., (3-O), (17-O)
 Koehler, P., (62-S), (64-S), (128-P)
 Koerner, T., (64-S)
 Koganti, N., (5-O)
 Koivula, H., (37-P)
 Kokini, J. L., (38-O)
 Koxsel, F., (11-O), (40-P), (65-P), (71-P), (97-P), (104-P)
 Kong, L., (136-P)
 Korczak, R., (222-P)
 Kormendi, A., (42-P)
 Kowalski, R., (41-O)
 Kramer, K. L., (35-O)
 Krishock, D., (3-P)
 Kristiawan, M., (90-P)
 Kulling, S., (47-O)
 Kumar Ahlawat, A., (63-P)
 Kutcher, R., (49-P)
 Kweon, M., (116-P)
 Lacorn, M., (19-P)
 Lam, R., (124-P)
 Lambrecht, M. A., (39-O)
 Lamothe, L., (224-P)
 Lamsal, B., (174-P), (176-P)
 Larroque, O., (18-O)
 Lavelli, V., (150-P)

- Lazo-Velez, M., (236-P)
 Le Bleis, F., (4-O)
 Le Brun, O., (35-P)
 Le, K., (7-O)
 Le-Bail, A., (13-O), (13-O), (105-P), (200-P)
 Lee, D. J., (26-O), (47-P), (145-P), (190-P)
 Leethanapanich, K., (164-P)
 Leroy, V., (71-P)
 Levine, H., (116-P)
 Leyne, E., (18-O)
 Li, A., (61-S), (8-O), (56-O), (6-P), (50-P),
 (86-P), (88-P), (89-P), (141-P),
 (143-P), (188-P), (194-P), (195-P),
 (215-P), (230-P)
 LI, Y., (184-P)
 Liang, Y., (8-O)
 Lii, E., (218-P)
 LIM, S., (184-P)
 Lim, S. T., (179-P), (190-P)
 Lin, A. H. M., (5-S), (55-S), (50-O), (60-P),
 (126-P), (147-P)
 Lindgren, A., (189-P)
 Lindshield, B., (47-S)
 Liu, G. Y., (48-S), (14-O), (19-O), (55-O),
 (33-P), (93-P), (99-P), (171-P), (215-P),
 (232-P)
 Loisel, C., (13-O)
 Lombi, E., (9-O)
 Lopez, N., (53-P)
 Losso, J., (35-O)
 Lourdin, D., (172-P)
 Lujan Rhenals, D., (130-P)
 Luo, X., (86-P), (191-P)
 Ma, F., (64-P), (76-P)
 Määttänen, A., (37-P)
 Maelzer, U., (19-P)
 Mahendru, A., (63-P)
 Malalgoda, M., (49-S)
 Malcolmson, L., (21-S)
 Maliska, J., (57-S)
 Malunga, L., (29-O)
 Manepalli, P. H., (52-O), (175-P)
 Manful, J., (74-S), (119-P)
 Manley, M., (197-P)
 Manthey, F., (21-P), (33-P), (41-P), (135-P),
 (140-P), (144-P), (194-P)
 Marcone, M., (51-P)
 Marengo, M., (73-S), (5-P), (150-P)
 Mariscal Moreno, R. M., (54-P)
 Marquart, L., (19-O), (222-P), (232-P)
 Martens, E. C., (58-P), (233-P)
 Marti, A., (73-S), (13-O), (5-P), (67-P),
 (103-P), (125-P), (128-P), (168-P)
 Martínez Flores, H. E., (54-P)
 Martínez, I., (231-P)
 Martinez, M. F., (28-O), (163-P)
 Masatcioglu, M. T., (97-P)
 Masey O'Neill, H., (26-O)
 Masisi, K., (7-O)
 Maskus, H., (42-S), (114-P)
 Mathew, J. M., (199-P)
 Mattioni, B., (34-O)
 Mauer, L. J., (180-P)
 McCleary, B. V., (51-O)
 McGinnis, S., (29-P)
 McGuire, C. L., (96-P)
 McMillan, T., (42-P)
 McSweeney, M., (158-P)
 Meda, V., (1-P)
 Meinhardt, S., (49-S)
 Melama, L., (108-P)
 Meldrum, A., (41-O)
 Meng, L., (99-P), (171-P)
 Micard, V., (108-P)
 Michaels, T., (168-P)
 Mileo, A. F., (6-P)
 Miller, R., (9-P), (43-P), (48-P), (66-P),
 (154-P)
 Minnaar, A., (71-S)
 Miura, M., (36-P)
 Miyoshi, T., (36-P)
 Moayedi, S., (194-P)
 Moghadasian, M. H., (7-O)
 Mohammad Zadeh, E., (54-O)
 Montemayor Mora, G., (2-P), (118-P)
 Morales-Sánchez, E., (207-P)
 Morehart, L., (24-S)
 Morris, C., (3-O), (17-O), (36-O), (41-O)
 Mortensen, K., (172-P), (209-P)
 Mu, K., (129-P)
 Mukhopadhyay, S., (167-P), (169-P)
 Murphy, K. M., (36-O)
 Murray, J. C., (17-O)
 Naguleswaran, N., (59-S)
 Nakamura, K., (43-O), (46-P)
 Nam, S., (123-P)
 Namkung, H., (179-P)
 Nantanga, K., (4-S)
 Nappa, M., (109-P)
 Ndiaye, A., (90-P)
 Ndindeng, S., (119-P)
 Ndolo, V., (131-P), (227-P), (228-P)
 Nelson, C. K., (177-P)
 Newberry, M., (18-O)
 Ng, P. K., (97-P), (98-P), (115-P), (132-P)
 Nichols, B. L., (59-P), (60-P)
 Nickerson, M., (40-P), (77-P), (79-P),
 (80-P), (104-P), (124-P), (129-P), (163-P)
 Nie, X., (233-P)
 Nnanna, I., (34-S)
 Nordlund, E., (27-O)
 Nuñez-Santiago, M. C., (201-P)
 Nutsch, J., (187-P)
 Nyirenda, B., (227-P)
 Nyström, L., (10-O), (44-O)
 Oakley, A., (66-P), (154-P)
 Oda, S. I., (60-P)
 O'Donovan, J., (42-P)
 Ohm, J., (49-S), (21-P), (139-P)
 Okusu, H., (80-S), (34-P)
 Olson, E., (132-P)
 Omary, M., (33-S)
 Ong, C., (155-P)
 Opara, L. U., (197-P)
 Opekun, A. R., (59-P)
 Ortega Castillo, L., (2-P)
 Orts, W. J., (76-S)
 Ostrander, R., (73-P), (74-P)
 Owusu, M., (119-P)
 Pacheco-Vargas, G., (201-P)
 Pagani, A., (73-S), (5-P), (67-P), (150-P)
 Page, J. H., (11-O), (38-P), (39-P), (71-P)
 Panda, R., (49-O)
 Pareyt, B., (69-P)
 Park, C. S., (30-O), (101-P)
 Pasupuleti, S. K., (18-P)
 Paterson, D., (9-O)
 Patindol, J., (130-P), (162-P), (164-P)
 Patterson, C. A., (16-P)
 Paulino, N., (34-O)
 Peltonen, J., (37-P)
 Pérez Carillo, E., (2-P), (118-P)
 Perez Herrera, M., (50-S)
 Peter, R., (1-P)
 Peters, T., (31-S)
 Peterson, D. G., (1-O)
 Peymanpour, G., (4-S)
 Pike, O. A., (133-P)
 Plank, D. W., (15-S)
 Pletsch, E. A., (46-O)
 Pohlman, T., (73-P), (74-P)
 Polania-Gaviaria, L. Y., (148-P)
 Poms, R., (64-S)
 Ponce-García, N., (31-P), (32-P)
 Poutanen, K., (109-P)
 Pozniak, C., (8-S), (123-P)
 Prenzler, P. D., (82-P)
 Pritchard, J., (18-O)
 Puchbauer, A. K., (85-P)
 Qiao, D., (93-P)
 Quaglia, L., (5-P), (67-P)
 Quayson, E. T., (103-P), (125-P)
 Quezada-Calvillo, R., (60-P)
 Racinelli, F., (67-P)
 Ral, J. P. F., (18-O)
 Ramchandran, D., (55-O), (213-P)
 Ramer-Tait, A., (231-P)
 Ramírez Wong, B., (31-P)
 Ramos-Gómez, M., (207-P)
 Rao, S., (107-P)
 Ratnayake, W. S., (199-P)
 Rausch, K. D., (23-O), (213-P)
 Rayas Duarte, P., (32-P), (54-P)
 Rayas-Duarte, P., (75-P), (107-P)
 Rayner, M., (40-O)
 Razavi, S. M., (16-P)
 Regassa, T., (134-P)
 Regina, A., (223-P)
 Reuhs, B. L., (233-P)
 Reynoso-Camacho, R., (207-P)
 Ringier, L., (10-O)
 Rippke, G., (23-P), (29-P)
 Rizzello, C., (27-O)
 Robison, R. A., (133-P)
 Rodriguez-Sandoval, E., (10-P), (148-P)
 Rogers, S., (16-O)
 Román, L., (15-P)
 Rombouts, I., (39-O)
 Rooney, W., (69-S)
 Rosa Sibakov, N., (108-P)
 Rose, D., (32-O), (61-P), (91-P), (95-P),
 (134-P), (159-P), (231-P)
 Rosell, C. M., (153-P)
 Rueda, J., (13-S), (43-S)
 Rugmai, S., (210-P)

- Saari, H., (40-O)
 Sabillon, L., (134-P)
 Sackmann, I., (219-P)
 Sagnelli, D., (57-P), (172-P), (206-P)
 Sahasrabudhe, S. N., (199-P)
 Sakamoto, J., (83-P)
 Saliba, A., (82-P)
 Salimi Khorshidi, A., (38-P), (39-P)
 Sanal, T., (65-P)
 Sánchez-Agredo, L. E., (10-P)
 Sanderson, E., (158-P)
 Santala, O., (109-P)
 Santiago Ramos, D., (54-P)
 Santiago-Ramos, D., (207-P)
 Santos, J., (183-P)
 Santra, D., (91-P)
 Sapirstein, H., (15-O), (70-P)
 Sato, K., (36-P)
 Scanlon, M. G., (11-O), (38-P), (39-P),
 (40-P), (71-P), (77-P), (79-P), (80-P),
 (104-P), (124-P), (186-P)
 Schendel, R., (47-O), (85-P), (219-P)
 Scherf, K., (63-S)
 Schmieg, D., (15-S)
 Schoenlechner, R., (70-S), (117-P)
 Seetharaman, K., (13-O), (51-P)
 Seguchi, M., (166-P)
 Segura, R., (231-P)
 Selling, G. R., (122-P)
 Selway, N., (30-P)
 Serna Saldívar, S. O., (2-P), (31-P), (118-P),
 (221-P)
 Serna-Saldivar, S., (236-P)
 Shao, Y. F., (75-S)
 Sharma, P., (49-P)
 Shehzad, A., (100-P)
 Shelat, K. J., (30-P)
 Shi, L., (129-P)
 Shillito, R., (6-S)
 Shimbata, T., (43-O)
 Sibakov, J. K., (109-P)
 Siebeneicher, S., (19-P)
 Siebenmorgen, T. J., (160-P), (167-P),
 (169-P)
 Silbir, S., (108-P)
 Siliveru, K., (181-P)
 Simsek, S., (49-S), (32-P), (52-P), (139-P),
 (144-P), (149-P), (189-P), (217-P)
 Singh, M., (23-O), (55-O), (56-O), (110-P),
 (121-P), (141-P), (173-P), (213-P)
 Sirin, E., (127-P)
 Sissons, M., (25-O)
 Sistrunk, C., (57-S)
 Sjöö, M., (40-O)
 Slade, L., (116-P)
 Slavina, J. L., (222-P)
 Sloane, N., (51-O)
 Smith, D. L., (16-O)
 Smolders, E., (9-O)
 Sneddon, K. A., (1-O)
 Somavat, P., (141-P)
 Song, Y., (227-P)
 Sozer, N., (108-P)
 Stark, C., (51-S)
 Steele, F. M., (133-P)
 Steen, A., (198-P)
 Stevens, J., (32-S), (32-S)
 Stitzlein, J., (10-S)
 Stojceska, V., (146-P)
 Stokes, J. R., (30-P)
 Stone, A. K., (124-P), (163-P)
 Storsley, J., (18-S)
 Stratton, J., (134-P)
 Strybulevych, A., (11-O), (38-P), (39-P),
 (71-P)
 Stutts, W. L., (49-O)
 Su, M. Y., (79-S), (170-P), (225-P)
 Suarez-Rodriguez, C. d. P., (203-P)
 Subbiah, J., (91-P)
 Suchy, J., (83-P)
 Sumargo, F., (95-P), (159-P)
 Sun, X., (104-P)
 Svensson, B., (31-O)
 Swane, S., (27-S)
 Swanson, K. S., (23-O)
 Swindler, J., (187-P)
 Tabara, A., (166-P)
 Talcott, S., (226-P)
 Tanner, G. J., (37-O)
 Tassou, S., (146-P)
 Tavman, S., (38-O)
 Tawil, G., (35-P)
 Taylor, D., (68-S), (69-S), (53-O), (123-P)
 Thandapilly, S., (18-S)
 Thatte, A., (52-O)
 Thomas, S., (52-O)
 Thompson, H. J., (12-S), (157-P)
 Thornburgh, H., (232-P)
 Tilley, M., (34-O)
 Tinker, N. A., (43-P)
 Tömöskösi, S., (64-S), (70-S), (117-P)
 Tongta, S., (196-P), (206-P), (210-P)
 Török, K., (117-P)
 Torres Chávez, P., (31-P)
 Trumbo, P., (17-S)
 Tulbek, M., (57-S), (60-S)
 Tumbleson, M., (23-O), (213-P)
 Tuncil, Y. E., (58-P)
 Turbin-Orger, A., (100-P)
 Tyler, R. T., (1-P)
 Uraipong, C. G., (6-O)
 Uzunalioglu, D., (57-S), (12-P)
 Vamadevan, V., (4-S)
 Van Deynze, A., (7-S)
 van Egmond, P., (143-P)
 Van Haesendonck, I., (42-O)
 Vandenberg, A., (163-P)
 Vanneste, J., (69-P)
 Vasanthan, T., (50-S), (53-P)
 Véles-Medina, J. J., (32-P), (207-P)
 Vergnes, B., (90-P)
 Vericel, G., (17-P), (35-P), (112-P)
 Vrinten, P., (43-O)
 Waduge, R., (4-S)
 Wahlgren, M., (40-O)
 Wallace, T. C., (38-S)
 Walter, J., (231-P)
 Wang, H., (18-S), (41-O), (55-O), (56-O),
 (86-P), (86-P), (86-P), (130-P), (155-P),
 (156-P), (159-P), (162-P), (164-P),
 (170-P), (174-P), (183-P), (191-P),
 (215-P), (218-P), (225-P)
 Ward, L., (187-P)
 Warren, F., (25-O), (28-P)
 Watson, E. M., (48-P)
 Weaver, G. L., (53-S)
 Wefers, D., (20-P)
 Wehling, P., (28-S), (65-S)
 Wei, Y. M., (48-S), (14-O)
 Weier, S. A., (61-P), (91-P), (95-P)
 Weiss, T., (19-P)
 Welti-Chanes, J., (221-P)
 Wetzel, D. L., (20-O)
 Whan, A., (18-O)
 Whitehead, T. R., (23-O)
 Whitney, K., (52-P), (217-P)
 Wight, C. P., (43-P)
 Wilderjans, E., (42-O)
 Wilkens, C., (31-O)
 Williams, P. C., (76-S), (220-P)
 Wilson, J. D., (17-O)
 Wiseman, J., (26-O)
 Wood, D. F., (76-S), (82-P)
 Wu, G., (48-S), (14-O), (15-O), (36-O),
 (70-P)
 Xia, H., (195-P)
 Xiao, X., (99-P), (171-P)
 Xiong, G., (35-S), (225-P)
 Xu, J., (175-P)
 Y. Sinaki, N., (178-P)
 Yalçın, E., (127-P)
 Yang, J., (225-P), (231-P)
 Yangcheng, H., (6-P), (211-P)
 Yazar, G., (38-O)
 Yi, C., (188-P)
 Yildiz, E., (57-S)
 Yin, J., (29-S)
 Yu, L., (93-P), (99-P), (171-P)
 Yurgec, M., (12-P)
 Zanoletti, M., (5-P), (150-P)
 Zbylut, S., (28-S), (31-S)
 Zeng, H. M., (147-P)
 Zhai, H., (182-P)
 Zhang, B., (48-S), (48-S), (75-S), (14-O),
 (14-O), (30-P), (86-P), (88-P), (224-P)
 zhang, z., (89-P)
 Zhao, B., (35-S), (2-O), (6-O), (72-P),
 (142-P)
 Zheng, L., (8-O)
 Zhong, V., (187-P)
 Zhou, T., (51-S), (86-P)
 Zhu, L., (47-S), (175-P)
 Zortea, M. E. B., (6-P)
 Zou, W., (25-O)

Celebrate our Centennial at the AACCI PRESS Bookstore!



100-plus titles all on sale, including our latest lineup!

Buy 3 books, and get 100% off shipping plus your choice of Ingredient Handbook FREE!

Subscribe to our entire online book collection for just \$100!



First 100 customers get a free **AACCI commemorative cereal box** filled with surprise gifts!*

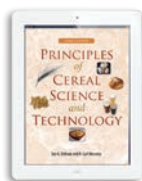
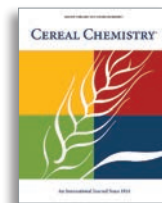
PLUS

- Order the new User's Guide to ISO 22000 Food Safety Management System for the Grain Handling, Processing, Milling, and Baking Industries



- Try our comprehensive Grain Science Library online resource

- Learn the benefits of authoring in *Cereal Chemistry*



- Apply for FREE CLASSROOM ACCESS to *Principles of Cereal Science and Technology, Third Edition*

- Learn how to 'pair' your library's AACCI book and journal subscriptions with your mobile device for easy access on the go

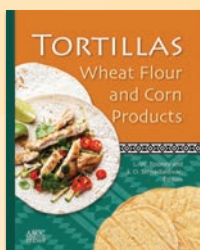


See program book for locations and hours!

*Purchase required

And make sure to attend our centennial book signing event:

12:00 – 2:00 p.m. on Tuesday, Oct. 20



Tortillas: Wheat and Corn Flour Products signing
With Editors Lloyd W. Rooney
and Sergio O. Serna-Saldívar



Rooney

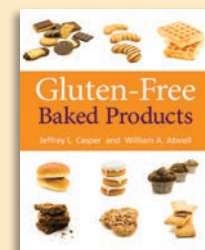


Serna-Saldívar

Gluten-Free Baked Products signing
With Co-Author
Jeff Casper



Casper



ADVERTISERS' INDEX

Almond Board	18
www.almondboard.com	
Bay State Milling	20
www.baystatemilling.com	
Bepex	39
www.bepex.com	
Buhler Inc.	66
www.buhlergroup.com	
C.W. Brabender Instruments, Inc.	Inside Front Cover
www.cwbrabender.com	
CHOPIN Technologies	43
www.chopin.fr	
CPM Wolverine Proctor	30
www.wolverineproctor.com	
Enzyme Development Corporation	60
www.enzymedevelopment.com	
FOSS	79
www.foss.us	
Grain Millers, Inc.	13
www.grainmillers.com	
Great Plains Analytical Laboratory	Inside Back Cover
www.ciilab.com	
Hesco, Inc.	47
www.hesco-inc.com	
ICL Food Specialties	5
www.iclfood.com	
Medallion Labs	50
www.medallionlabs.com	
Megazyme	8
www.megazyme.com	
NP Analytical Labs	21
www.npal.com	
Palsgaard Incorporated	37
www.palsgaard.com	
Perten Instruments	1
www.perten.com	
Richardson Milling	32
www.richardson.ca	
Tree Top, Inc.	35
www.treetop.com	
Wenger	Back Cover
www.wenger.com	

AACC International

Annual Meeting Mobile App	6
AACCI Centennial Activities	19
Take Charge of Your Membership	27
AACCI PRESS Enhanced Guide to Food Safety	29
AACCI PRESS Bookstore	34
AACCI Foundation	41
AACCI PRESS Volunteer Thank You	65
2016 AACCI Annual Meeting and Call for Abstracts	80
AACCI PRESS Bookstore	85
Network with the Faces of the Future	86

AACC INTERNATIONAL CENTENNIAL

NETWORK WITH THE FACES OF THE FUTURE



"As much as we have already learned about cereal grain science, we have barely scratched the surface. Research opportunities remain largely untapped and extremely exciting. AACCI is uniquely positioned to help interface processing and nutrition—its leadership in exploring this potential will have a consequential impact on human health for generations to come."

YIFANG CHU
PepsiCo Nutrition



The Baking, Milling & Grain Industries' Best Friend

With over 20 years of service in the grain, milling and baking industry, Great Plains Analytical Laboratory has proven itself to be a trusted collaborator in helping our customers solve quality issues. As the leading cereal chemistry laboratory in the US, we continue to provide reliable and timely responses.

Great Plains offers a full range of services and complete quality analysis for special cereal chemistry and rheological testing as well as finished product and general food testing. Our high level of service and rapid turn-around time are well known.

Let us help guide you with your analytical, food safety and quality assurance needs. Contact us at 303.774.8262 or visit our website at www.gpalab.com.

Great Plains Analytical Laboratory (Formerly CII Labs)
9503 N. Congress Avenue, Kansas City, Missouri 64153
Lab: 816.891.7337 Fax: 816.891.7450
Email: gstewart@gpalab.com

ISO 17025

Quality analyses and testing for the food industry in areas including:

- **Nutritional Analysis**
- **Bake Testing and Rheological**
- **Microbiological**
- **Pesticide Residues**
- **HPLC Mycotoxins**
- **Minerals, Insect Frags, Water Testing**



Great Plains
Analytical Laboratory

**Excellent firms don't believe in excellence
- only in constant improvement and constant change.**

—Tom Peters



Is it time to shift production to a more favorable continuous process?

You can get higher levels of thermal energy than ever thought possible – for a more gentle cooking process compared to high-shear cook. With Wenger's Thermal Twin Screw Extruder, products high in corn or rice content are processed without the stickiness typically encountered in conventional extrusion systems. The Thermal Twin design allows ingredients to be fully cooked without damage to the starch or protein matrix.

Contact us now for details on the revolutionary Thermal Twin Screw Extruder Series to learn how it can transform your process and your bottom line.

Turning ideas into opportunities.
PROGRESSIVE FOOD PROCESSING

Imagine the possibilities



wenger.com

BELGIUM TAIWAN BRASIL CHINA INDIA