Is your flour IN?

Each flour based product requires its specific flour profile.

The **Mixolab Profiler** entirely characterizes this profile within a range of 6 mini/maxi quality values.

In 1 single test, get the **Mixolab Index** of your flour and see if it’s IN the **Target Profile**.

**With the Mixolab Profiler, your quality is under control**

**You asked for it...   ...CHOPIN made it!**

More information about the Mixolab Profiler on: [www.chopin.fr/mixolab.profiler.pdf](http://www.chopin.fr/mixolab.profiler.pdf)
Ask us about Process and Quality Control...

...of Grain, Flour, Food and Feed.

Speak with us about NIR, RVA, Falling Number, Gluten, Moisture, Dough testing and anything else under the sun. From grains to finished goods, in R&D, manufacturing and the Q.C. lab, we have the instruments to help you develop and make the best product possible while saving you time and money.

To find out more about our quality solutions and for local contact information, please visit us at www.perten.com

SPECIALISTS IN QUALITY CONTROL OF GRAIN, FLOUR, FOOD AND FEED

www.perten.com
If Food Testing is the Question, Eurofins can provide the Answer.

Eurofins provides the agrifood industry with world class analytical expertise and extensive experience in analyzing food products and ingredients for nutrition and food safety. Our services are backed by our reputation for quick turnaround time, accurate data, and superior customer service.

- Verification of Product and Quality Specifications
- Nutritional Analysis (Vitamins, Amino Acids)
- Analysis of Chemicals and Drug Residues
- GMO Testing and Allergen Detection
- Detection of Contaminants (Mycotoxins, Pathogens, Ruminant)
- Food Safety and QA Consulting
- Unparalleled Range of Testing and Support Services with More than 150 Laboratories in 30 countries

To learn more, call 504-297-4339, visit www.eurofinsus.com or email us at info@eurofinsus.com.
New Initiatives!
AACC International is excited to announce an all-new meeting program format for our 2009 annual meeting based on the seven key scientific initiatives.

New Program!
The 2009 scientific program includes premeeting workshops, short course, forums, technical presentations, and hundreds of posters.

New Focus!
The new program keeps science and learning at the forefront while helping to shape the grain industry with clarity and focus.

Thank You, Sponsors

About the Organization
AACC International brings together top grain scientists from around the world and from diverse backgrounds of academia, industry, and government to solve problems, share information, exchange ideas, and create solutions. Members come together to solve current industry issues, determine quality measurements, and define components. From taking action on current issues affecting the grain-based food industry to creating globally accepted science-based definitions, AACC International members shape the future of grain-based food products and policy.

AACC International is focusing on seven key scientific initiatives that will guide the association in providing members with relevant information and help build strong scientific communities. As the one truly global association concentrating on the advancement of grain science, AACC International offers many opportunities to advance members’ knowledge and skills within these initiatives. Resources, such as Cereal Foods World, Cereal Chemistry, specialized publications and meetings, the check sample service, and annual meetings help members to maintain a competitive advantage in the rapidly changing grains industry.

AACC International enables members to receive training and build the skills needed to achieve personal and professional success. Members at all career stages receive lifelong learning opportunities through specialized short courses that offer cutting-edge research, insight, and a global perspective on issues affecting the worldwide grains-based food industry. Members also receive valuable, real-world management training by serving in committees, divisions, and sections.

Visit the AACC International Marketplace in the Exhibit Hall to learn more about the 7 Scientific Initiatives and the many new exciting resources and services!
Stop by Marketplace in the Expo Hall for all your AACC International needs!

Learn about the **7 key scientific initiatives**
- Browse the **books** for sale
- Review the **job board** for open positions or post your resume
- Receive a FREE 2GB Flash Drive when you **set up a saved-search alert** in *Cereal Chemistry*
- Pick up a **member ribbon** to display the number of years you’ve been a member
- Preview the **Cereal Science Knowledge Database**
- Pick up a copy of *Cereal Foods World*
- Order a copy of the **Annual Meeting Posters on CD**
- **Ask questions** about your membership
- Purchase an **AACC Intl. shirt**
- Make a **Foundation** donation
- Learn about the **check sample program**
- Find out about the **2010 annual meeting** in Savannah, Georgia, U.S.A.

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The Georgia Queen courtesy of the Savannah Area CVB.
As the 2009 AACC International program chair, I am thrilled to be here with you in Baltimore and very excited about the program we’ve got planned!

AACC International, a leader in gathering and distributing scientific and technical information, provides the annual meeting as your best opportunity to dissect and discuss what we’ve been working on throughout the year. The 2009 AACC International Annual Meeting features an outstanding program with industry leaders presenting on topics such as foods for better health, the role of grain-based foods in the prevention of childhood obesity, breeding and bioconversion of plants for sustainability, non-food uses of plant-based materials, biofuel from maize, replacing gluten functionality, and much more.

The new annual meeting program, based on AACC International’s 7 Scientific Initiatives, focuses on the areas of most interest to our attendees. We have streamlined our program to make it easier for you to locate the sessions, posters, exhibits, and speakers that apply most directly to the work you do on a daily basis. In addition, afternoon sessions now offer more time for audience participation and discussion of relevant topic areas. These sessions are structured around panel discussions and require your participation to make them relevant, so I strongly encourage you to get involved. Finally, at the end of each session, the last presentation slide will help you locate the posters that apply directly to the topics discussed at the session.

I thank the members of the Annual Meeting Technical Program Planning Committee, including my co-chair Christophe Courtin, for their dedication and hard work over the past year in helping me plan this year’s meeting. I’m looking forward to my time here in Baltimore and to all the opportunities offered at the annual meeting.

Jodi Engleson
AACC International Annual Meeting Program Chair
Welcome to Baltimore! We’re excited to launch a new annual meeting program format and hope that you find the program easy to navigate, highly informative, and relevant to today’s most critical issues.

The Annual Meeting Technical Program Planning Committee, led by Jodi Engleson and vice chaired by Christophe Courtin, has designed the 2009 program around the association’s 7 Scientific Initiatives. These initiatives will guide the meeting, as well as the association in general, in providing relevant information, strong scientific communities, and significant opportunities for disseminating research findings. As the AACC International president, I could not be more proud of the program we’ve put together, including more than 200 posters, more than 130 exhibitors, 80 oral technical presentations, 29 socials and networking events, 24 scientific and technical sessions, 2 premeeting short courses, 2 premeeting workshops, a hot topic forum, and the closing session with keynote speaker H. S. Muralidhara of Cargill, Inc.

Thank you for joining us in Baltimore. Please join me, the AACC International Board of Directors, and the annual meeting chair and vice chair for an informal discussion about the association and the meeting immediately after the opening session on Monday morning. I’m excited about the new opportunities here and looking forward to a great meeting!

As you look through the program book and begin to plan your schedule for the next few days, I want to draw your attention to a few new highlights this year.

**USDA Research Funding Opportunities**
*Tuesday, September 15*

AACC International is committed to advancing grain science research, but research is not possible without funding. National program leaders from the USDA will provide an update on the Agriculture and Food Research Initiative (AFRI) competitive grants program that began this year, as well as other grant opportunities. See page 29 for the full session description.

**Third-Party and Customer Audits: A Current Perspective for Stakeholders Forum**
*Tuesday, September 15, continues Wednesday, September 16*

AACC International will be among the first associations in the industry to tackle the complex and highly specialized area of third-party and costumer audits in the food-processing industry from a truly global perspective. The Tuesday session provides a rare opportunity to hear from a variety of important disciplines and areas of expertise, while the Wednesday session will answer concrete questions and resolve issues. See page 31 for the full session description.

**Reuse/Recyle Water Opportunities and Challenges in the Food/Bio-Processing Industry Using Membrane Technology: Is This Myth or Reality?**
*Wednesday, September 16*

Water availability is arguably the most pressing resource in the world and this year’s keynote speaker, H. S. Muralidhara of Cargill, Inc., will discuss how the food-processing industry can address the importance of recycling and reusing water in order to promote sustainable development. See page 39 for the full session description.

Mary Ellen Camire
AACC International President
General Information

Registration
The AACC International Registration Desk will be open during the following hours:

*Hall AB, Convention Center*
Sunday, September 13  
4:00 – 7:00 p.m.
Monday, September 14  
7:30 a.m. – 5:30 p.m.
Tuesday, September 15  
7:30 a.m. – 4:00 p.m.

*Main Terrace, Level 300, Convention Center*
Wednesday, September 16  
7:30 a.m. – 1:30 p.m.

Exhibits
*Hall AB, Convention Center*
Sunday, September 13  
4:00 – 7:00 p.m.  
Grand Opening Exhibition
Monday, September 14  
3:30 – 6:30 p.m.  
Exhibits with Beer and Poster Viewing
Tuesday, September 15  
10:30 a.m. – 2:00 p.m.  
Coffee at the Exhibits

Posters
*Hall AB, Convention Center*
Monday, September 14  
7:00 – 10:00 a.m.  
Poster Set-Up
10:00 a.m. – 3:30 p.m.  
Poster Viewing
3:30 – 6:30 p.m.  
Beach and Poster Viewing with Exhibits
3:45 – 5:00 p.m.  
Poster Authors Present

Tuesday, September 15  
8:00 a.m. – 2:00 p.m.  
Poster Viewing
10:45 – 11:45 a.m.  
Poster Authors Present
2:00 – 6:00 p.m.  
Poster Take Down

AACC International Marketplace
*Hall AB, Convention Center*
Sunday, September 13  
4:00 – 7:00 p.m.
Monday, September 14  
3:30 – 6:30 p.m.
Tuesday, September 15  
10:30 a.m. – 2:00 p.m.

*Main Terrace, Level 300, Convention Center*
Monday, September 14  
9:00 a.m. – 3:00 p.m.
Tuesday, September 15  
2:00 – 5:00 p.m.
Wednesday, September 16  
9:00 – 11:00 a.m.

Offsite Venues
Cereals & Europe Section Event and Dinner
Phillips Harborplace Restaurant
301 Light Street
Baltimore, MD 21202
Phone: 410.685.6600

Carbohydrate Division Dinner
Rusty Scupper Restaurant
402 Key Highway
Baltimore, MD 21230
Phone: 410.727.3678

Student Division Social and Dinner
Germano’s Trattoria
300 South High Street
Baltimore, MD 21202
Phone: 410.752.4515

Rice Division Dinner
Phillips Harborplace Restaurant
301 Light Street
Baltimore, MD 21202
Phone: 410.685.6600
Open Meeting Rooms
A meeting room will be available at the Hilton for groups of 20 people or less. Sign up at the annual meeting registration desk.

Sunday, September 13  1:00 – 6:00 p.m.  Hilton
Monday, September 14  7:00 a.m. – 5:00 p.m.  Hilton
Tuesday, September 15  7:00 a.m. – 5:00 p.m.  Hilton
Wednesday, September 16  7:00 a.m. – 5:00 p.m.  Hilton

Abstract Printing Station
Abstracts are available during the meeting at the abstract printing station, located by exhibits 601/700 and meeting rooms 308/309 on level 300, where you can search and print the abstracts for those sessions you are most interested in attending.

Transportation While in Baltimore
Baltimore is a very walkable city with the convention center and hotel located just a few short blocks from Baltimore’s Inner Harbor, where you can find restaurants, shopping, entertainment, and attractions. The MARC train is accessible by the hotel and offers low-cost transportation to and from Washington, DC. Amtrak also offers service to all locations up and down the East Coast.

Media Information
Members of the media seeking interviews onsite should contact AACC International staff member Susan Kohn at the Registration Desk. Media kits and press releases will also be available at registration.

Safety Procedures
- 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
- 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.
- Put 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 slam 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. Fold it into a triangle and put the corner in your mouth.
- Do not take the elevator when you smell smoke or if you know that there is a fire in the building.

Photo Release
Photographs will be taken at the 2009 AACC International Annual Meeting. By attending this meeting, you agree to allow AACC International’s use of your photo in any AACC International publications or website.

Job Board
Meeting attendees are invited to stop by the job board in the AACC International Marketplace to post resumes, open positions, or calls for research collaborators.

Appropriate Attire
Meeting attire is business casual.

Medical Emergencies
Medical emergencies should be communicated to an AACC International staff member as soon as possible.

The nearest medical facility is:
University of Maryland Medical Center
22. S. Greene St.
Baltimore, MD 21201-1595
410.328.UMMS (8667)
See a demo of the
NEW 11th Edition

Approved Methods
of Analysis
at Marketplace and the Bookstore!

Networked Opportunities/Social Program

For additional social events, check the program schedule for division, section, and alumni activities.

Sunday, September 13

Exhibitor Welcome
2:30 – 3:30 p.m. • Hall AB, Convention Center
All exhibitors are invited! Enjoy light refreshments, network with peers, meet exhibit staff, and get tips from exhibitors to jump start your experience.

Grand Opening Exhibition
4:00 – 7:00 p.m. • Hall AB, Convention Center
Kick off the 2009 annual meeting at the Grand Opening Exhibition! Greet old friends, make new acquaintances, and visit with more than 130 of the industry’s leading suppliers during this casual and festive event. Light appetizers will be served.

Monday, September 14

Mentoring Kick-Off Event
7:00 – 8:00 a.m. • Key Ballroom 5 – 8, Hilton
Join other mentors and protégés during the kick-off event for all members who signed up for the AACC International mentoring program, hosted by the Professional Development Panel. Learn more about the program, and meet your partner for the year or catch up with your partner from a previous year. Then stay to take part in the Opening General Session and Award ceremony.

Exhibits with Poster Viewing and Poster Authors
3:30 – 6:30 p.m. • Hall AB, Convention Center
3:45 – 5:00 p.m. Poster Authors Present
Grab a beer, it’s free… Expand your knowledge and meet the authors as they present their latest research. Also, take time to visit the exhibits and meet with leading suppliers.

Tuesday, September 15

Coffee at the Exhibits
10:30 a.m. – 2:00 p.m. • Hall AB, Convention Center
New Time! Take a break! Grab a cup of coffee and visit with industry suppliers, view posters, and shop at the AACC International Marketplace. Take your time and stay for lunch. Cash lunch concessions will be available.

Young Professionals Event
4:00 – 5:30 p.m. • Tubman B, Hilton
Stop by for some lively conversation after the day’s technical sessions and chat with other young/new professionals and association leaders about the latest hot topics or set up a dinner engagement with fellow attendees. Anyone 35 years and younger, those new to the profession or those who would like to network with this group are invited to attend. This event is sponsored by the Joseph Warthesen Young Professional Endowment Fund.

View all AACC International Items on SALE at 2 Locations.

AACC International Marketplace, Exhibit Hall
Sunday, Sept 13 4:00 p.m. – 7:00 p.m.
Monday, Sept 14 3:30 p.m. – 6:30 p.m.
Tuesday, Sept 15 10:30 a.m. – 2:00 p.m.

Bookstore: Main Terrace, Level 300
Monday, Sept 14 9:00 a.m. – 3:00 p.m.
Tuesday, Sept 15 2:00 p.m. – 5:00 p.m.
Wednesday, Sept 16 9:00 a.m. – 11:00 a.m.
Division and Alumni Meetings/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. 

Repreregistration is required.

For events not taking place at the Hilton or the Convention Center (CC), see page 7 for location addresses.

Monday, September 14
7:00 – 9:00 p.m. Cereals & Europe Section Dinner • Phillips Harborplace Restaurant
7:00 – 11:00 p.m. Student Division Social and Dinner • Germano’s Trattoria

Tuesday, September 15
7:00 – 8:00 a.m. Cincinnati Section Meeting and Breakfast • Diamond Tavern, Hilton
7:00 – 8:00 a.m. Education Division Meeting • 306, CC
7:00 – 8:00 a.m. Engineering & Processing Division Breakfast and Business Meeting • 305, CC
12:00 – 2:00 p.m. Nutrition Division Meeting and Lunch • 305, CC
12:15 – 1:30 p.m. Milling & Baking Division Luncheon • 302 – 303, CC
4:45 – 6:00 p.m. Iowa State University and Friends Reception • Lobby Bar, Hilton
5:00 – 7:00 p.m. Protein Division Business Meeting and Social • Douglass, Hilton/Tubman A, Hilton
5:15 – 8:00 p.m. Biotechnology Division Meeting and Dinner • 305, CC
6:30 – 9:00 p.m. Carbohydrate Division Dinner • Rusty Scupper Restaurant
7:00 – 9:30 p.m. Rice Division Dinner • Phillips Harborplace Restaurant

Wednesday, September 16
7:00 – 8:00 a.m. Kansas State University Breakfast • 302 – 303, CC
7:00 – 8:00 a.m. North Dakota State University Alumni Breakfast • 305, CC
11:30 a.m. – 1:00 p.m. Rheology Division Lunch • 306, CC

Guest Program

The AACC International Annual Meeting is not offering a guest orientation this year. Guests at the annual meeting are encouraged to explore the city and visit the Baltimore Convention and Visitors Bureau at their satellite office in the Inner Harbor area or check with the hotel concierge for more information and to arrange tours of the Baltimore area.

Check Out the Cereal Science Knowledge Database in Marketplace!

Our new Cereal Science Knowledge Database is a technical resource like none other you've used.

Transform the way you find solutions

This tool is comprised of a library of netcasts—multimedia, scientific presentations from experts on a broad range of topics.

Immediate and in-depth information

The database will bring you face-to-face with leading experts in a variety of areas. It will be updated every month with new content, so the resource will continue to grow and evolve according to your needs and interests.

What are you waiting for?

The Cereal Science Knowledge Database is an indispensible resource, whether you have spent years building a career in grain science or are just beginning.

Subscriptions to the Cereal Science Knowledge Database are limited to AACC International members only! There is a special introductory individual subscription of just $49 per year. Discover this important new tool in Marketplace.
A Consistent Solution for Consistent Results

Cal-Sistent™ from ICL Performance Products offers food and beverage formulators a better way to fortify with calcium and phosphorus - without altering the key characteristics of consumers' favorite products.

Engineered as a fine powder, Cal-Sistent's small particle size makes it ideal for products targeted to deliver calcium without sacrificing mouth feel or taste.

Cal-Sistent delivers calcium to phosphorus ratios equivalent to those found naturally, including teeth and bones. Calcium and phosphorus work synergistically to help prevent osteoporosis and other bone health problems. Studies indicate that a higher total intake of calcium appears to lower the risk of cancer overall in women, and of colorectal cancer and other cancers of the digestive system in both men and women.*

- Meets FCC monograph criteria
- Kosher and Halal certified
- GMO and animal derivative free
- Allowed for use as an ingredient in properly labeled Organic formulations

* Archives of Internal Medicine Vol. 169: 391-401 (2009) with higher intakes of calcium have lower risks of colorectal cancer and other cancers of the digestive system.

For order assistance or technical service, please call toll free: (800) 244-6169 or (314) 983-7500.
www.icl-perfproductsllp.com
Innovative extrusion processes without limits. With our extensive extrusion know-how and passion for customized solutions, Buhler strives to generate added value and success for any product concept. With the addition of Aeroglide™ to the Buhler family, we now offer one of the most complete lines of process technology available anywhere. From raw material handling, cooking and shaping through extrusion to drying of finished products - from breakfast cereals and snack foods to modified flours and starches and texturized proteins. In short: extrusion processes without limits.

Visit Us: Booth 201

Buhler Inc., 13105 12th Ave N., Plymouth, MN 55441, T 763-847-9900
buhler.minneapolis@buhlergroup.com, www.buhlergroup.com/extrusion
## Personal Schedule

Use the blank lines to fill in the sessions and meetings you’ll be attending.

### Sunday, September 13

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:00 a.m.</td>
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<td>2:00 – 3:30 p.m.</td>
<td>Approved Methods Technical Committee Meetings</td>
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<td>3:30 p.m.</td>
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<tr>
<td>4:00 – 7:00 p.m.</td>
<td>Grand Opening Exhibition</td>
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### Monday, September 14

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<th>Time</th>
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<tr>
<td>8:00 a.m.</td>
<td>Opening General Session and Awards Ceremony</td>
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<tr>
<td>9:30 a.m.</td>
<td>Session:</td>
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<td>10:00 a.m. – 1:00 p.m.</td>
<td>Student Product Development Competition Presentations</td>
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<td>11:30 a.m. – 1:30 p.m.</td>
<td>Lunch Break</td>
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<td>1:30 p.m.</td>
<td>Session:</td>
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<td>3:30 – 6:30 p.m.</td>
<td>Exhibits with Beer and Poster Viewing</td>
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### Tuesday, September 15

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<tr>
<td>7:00 – 8:30 a.m.</td>
<td>Approved Methods Technical Committee Meetings</td>
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<td>8:30 a.m.</td>
<td>Session:</td>
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<td>10:30 a.m. – 2:00 p.m.</td>
<td>Coffee at the Exhibits</td>
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<td>12:00 – 2:00 p.m.</td>
<td>Lunch Break</td>
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<td>2:00 p.m.</td>
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### Wednesday, September 16

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<td>Approved Methods Technical Committee Meetings</td>
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<td>9:00 a.m.</td>
<td>Session:</td>
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<td>9:30 a.m.</td>
<td>Session:</td>
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<tr>
<td>11:30 a.m. – 1:00 p.m.</td>
<td>Lunch Break</td>
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<tr>
<td>1:30 p.m.</td>
<td>Session:</td>
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<tr>
<td>3:30 p.m.</td>
<td>Closing Session with Keynote Speaker and Farewell Reception</td>
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</tbody>
</table>
AACC International has long been a resource for technical information and breakthrough research. The 2009 annual meeting continues this vital tradition, focusing on the core of the organization and its primary mission—the global advancement of grain science.

To increase the quality of research and satisfy the diverse needs of members, the AACC International annual meeting focuses on seven key scientific initiatives that will guide the annual meeting program and provide members with relevant information, strong scientific content, and significant opportunities for disseminating research findings.

**Health & Nutrition**

Topics of and related to health and nutrition of cereals and pulses, alone and in products and ingredients derived from these plant materials. Adjunct topics may also include social impact of health and nutrition initiatives, medical reports, and other related topics.

**Food Safety & Regulatory**

All aspects of food safety, including microbes, toxins, contaminants and hazards. Any discussions of regulatory issues and legal challenges will be addressed.
Biotechnology & Sustainability

Studies of the impact of breeding (conventional, genetic modification, and other) on cereal plant composition and user traits, interaction effects of environment on gene expression, plant pathology, global climate change, production, agronomics, reducing energy consumption in production and processing, reducing carbon footprints, and the social/political/financial impacts of the above.

Cereal & Polymer Chemistry

All fundamental whole cereal, starch, protein, and other grain or pulse chemistry and any related polymer science approaches. Any study of chemical interactions of the component parts of grains is also included.

Quality & Analytical Methods

Analytical methods development, changes to methods, information about measuring quality of grain, ingredients or finished foods by chemical, physical or sensory testing are addressed. All aspects of rheology, as related to cereals, flour, dough, batter, extrudates, and cereal-based finished products, are included in this initiative.

Ingredients & Cost of Goods Sold

All aspects of raw materials, new discoveries of novel ingredients, novel applications of ingredients, and ways to reduce ingredient costs.

Engineering & Processing

The physical processing of grains, pulses, and food products, fuels, industrial chemicals and other in-process materials derived from grains and pulses, as well as modeling of these processes. New and more efficient engineering processes and equipment, and their impact on the production of both food and non-food products, will be addressed.
### 2009 AACC International Annual Meeting Schedule-at-a-Glance

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td><strong>Sunday</strong></td>
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</table>
|           | 2:00 – 3:30 p.m. | Approved Methods Technical Committees  
See page 16 for listing. |
|           | 4:00 – 7:00 p.m. | Grand Opening Exhibition                                             |
| **Monday**| 8:00 – 9:00 a.m. | Opening General Session and Awards Ceremony with Breakfast Foods and Coffee |
|           | 9:30 – 11:30 a.m.| HEALTHGRAIN Project Symposium  
[Health Grains Europe] • 309, CC  
Biotfuel from Maize: Current Economics and Future Sustainability • 307, CC |
|           | 11:30 a.m. – 1:30 p.m. | Poster Viewing and Lunch On Your Own |
|           | 1:30 – 3:30 p.m. | Health Claims and Use of Dietary Fibers in Cereal Products • 309, CC  
Technical Session: Rice Sustainability • 301, CC |
|           | 3:30 – 6:30 p.m. | Beer and Poster Viewing with Exhibits  
Open Evening  
Division and Section Socials and Dinners |
| **Tuesday**| 7:00 – 8:30 a.m. | Approved Methods Technical Committees  
See page 16 for listing. |
|           | 8:30 – 10:30 a.m.| The Effects of Dietary Fiber from Cereals on Gut Health • 309, CC  
Technical Session: Breeding and Bioconversion of Plants for Sustainability • 307, CC  
Best Student Paper Competition • 301, CC  
Hot Topic: USDA Research Funding Opportunities • Key Ballroom 12, Hilton  
Supplier Innovation Session I • 304, CC |
|           | 10:30 – 2:00 p.m.| Coffee at the Exhibits with Poster Viewing  
Lunch on Your Own • Division Lunches |
|           | 2:00 – 4:00 p.m. | Technical Session: Foods for Better Health • 309, CC  
Supplier Innovation Session II • 304, CC |
|           | 2:15 – 6:00 p.m. | Hot Topic: Third Party and Customer Audits: A Current Perspective for Stakeholders Forum • Key Ballroom 9-10, Hilton (continued from Tuesday)  
Open Evening  
Division and Section Dinners and Socials |
| **Wednesday**| 8:00 – 9:30 a.m. | Approved Methods Technical Committees  
See page 16 for listing. |
|           | 9:00 a.m. – 12:00 p.m. | Hot Topic: Third Party and Customer Audits: A Current Perspective for Stakeholders Forum • Key Ballroom 9-10, Hilton (continued from Tuesday) |
|           | 9:30 – 11:30 a.m. | Supplier Innovation Session III • 304, CC |
|           | 11:30 a.m. – 1:00 p.m. | Lunch on Your Own • ICC Luncheon |
|           | 1:00 – 3:00 p.m. | Technical Session: Potential Physiological Effects of Cereal Bioactives (includes Young Scientist Research Award) • 308, CC  
Supplier Innovation Session IV • 304, CC |
|           | 3:30 – 5:00 p.m. | Closing Session with Keynote Speaker H. S. Muralidhara and Farewell Reception |
Sessions are listed by scientific initiative and take place in the convention center (CC) unless otherwise indicated.

<table>
<thead>
<tr>
<th>Cereal &amp; Polymer Chemistry</th>
<th>Quality &amp; Analytical Methods</th>
<th>Ingredients &amp; Cost of Goods Sold</th>
<th>Engineering &amp; Processing</th>
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<tr>
<td>Cereal Grain Components: Analysis and Bioavailability • 307, CC</td>
<td>Technical Session: Molecular Origins of Starch Properties (includes 2009 Alsberg-French-Schoch Memorial Lecture) • 310, CC</td>
<td>Technical Session: Dough Structure and Rheology • 308, CC</td>
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<tr>
<td>Chemistry and Structure of Non-Wheat Proteins • 308, CC</td>
<td>Technical Session: Analysis of Fiber and Nutritional Quality (includes Edith A. Christensen Award Lecture) • 310, CC</td>
<td>Advances in Delivery of Food Nutrients – Tailoring Process Operations for Health and Wellness • 308, CC</td>
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<tr>
<td>Replacing Gluten Functionality • 307, CC</td>
<td>Technical Session: Tools to Evaluate Health Benefits of Cereals • 309, CC</td>
<td>Opportunities to Enhance Cereal Products: Pulse Components as Nutritional and Functional Ingredients • 308, CC</td>
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<td>Technical Session: Ensuring Grain and Dough Quality (includes 2009 Applied Research Award Lecture) • 310, CC</td>
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<td></td>
<td>Technical Session: Cereal Modification: Structure and Function (includes 2009 Thomas Burr Osborne Medal Lecture) • 307, CC</td>
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<tr>
<td></td>
<td>Technical Session: First Study to Report – Latest Findings in Cereal Chemistry (includes 2008 Applied Research Award Lecture) • 307, CC</td>
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<td>Characterizing the Size and Molecular Weight Distributions of Starch • 310, CC</td>
<td>The Role of Grain-Based Foods in the Prevention of Childhood Obesity • 309, CC</td>
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Technical committee meetings are your chance to join other scientists and experts in your specialty area to identify and discuss issues critical to you. Don’t miss this opportunity to bring your ideas, learn about key advances, and help enhance the AACC International Approved Methods of Analysis. These meetings are open to all attendees.

Sunday, September 13
2:00 – 3:30 p.m.
Asian Products Carroll A, Hilton
Methods for Grain and Flour Testing Paca A, Hilton
Physical Testing Methods Douglass, Hilton
Protein Methods Tubman A, Hilton
Oat Products Tilghman, Hilton
Statistical Advisory Brent, Hilton
Vitamins, Minerals, and Lipids Tubman B, Hilton

Tuesday, September 15
7:00 – 8:30 a.m.
Biotechnology Methods Brent, Hilton
Enzyme Analysis Carroll A, Hilton
Near Infrared Analysis Paca A, Hilton
Pasta Products Analysis Stone, Hilton
Rice Milling and Quality Tubman B, Hilton
Soft Wheat and Flour Products Douglass, Hilton
Yeast Evaluation Marshall, Hilton

Wednesday, September 16
8:00 – 9:30 a.m.
Barley and Barley Products Tubman B, Hilton
Bioactive Compounds Methods Carroll B, Hilton
Bread Baking Methods Carroll A, Hilton
Chemical Leavening Agents Stone, Hilton
Dietary Fiber and Other Carbohydrates Douglass, Hilton
Experimental Milling Marshall, Hilton
Pulse and Legume Paca A, Hilton

Approved Methods Technical Committee Meetings
Sunday, Tuesday, Wednesday

Technical committee meetings are your chance to join other scientists and experts in your specialty area to identify and discuss issues critical to you. Don’t miss this opportunity to bring your ideas, learn about key advances, and help enhance the AACC International Approved Methods of Analysis. These meetings are open to all attendees.

Sunday, September 13
4:00 – 7:00 p.m. Grand Opening Exhibition

Monday, September 14
3:30 – 6:30 p.m. Exhibits with Beer and Poster Viewing (grab a beer and meet with exhibitors)

Tuesday, September 15
10:30 a.m. – 2:00 p.m. Coffee at the Exhibits (grab a cup of coffee and meet with the exhibitors)

Exhibits will be open during the lunch hour on Tuesday; however, lunch will NOT be provided. Cash-and-carry lunches will be available during the noon break Monday – Wednesday.
Meet the Board +2

Monday, September 14
9:00 – 9:30 a.m. • Key Ballroom 5 – 8, Hilton

Ever wonder who makes the decisions for the association and why “they” make the decisions they do? Ever have ideas to make improvements for the association but don’t know whom to tell? Ever just want to talk about the association and the industry? Here’s your chance! The AACC International Board of Directors + 2 – the annual meeting program chair, Jodi Engleson, and vice chair, Christophe Courtin – will be available to do just that…listen, talk, and take notes. Don’t miss this opportunity to meet the board + 2 immediately following the Opening General Session.

Student Product Development Competition

Monday, September 14

Presentations: 10:00 a.m. – 1:00 p.m. • 302 – 303, CC
Posters: 1:00 – 5:00 p.m. • Hall AB, CC

See the future of the grain science industry show off their skills! This exciting competition challenges students to develop a new product containing at least one cereal product as the main ingredient. All meeting attendees are invited to attend the oral and poster presentations. Thank you to the many sponsors who make this competition happen through their prize money donations.

Cheer on your alma mater – teams competing this year are Fun Flavored Waffle Cones, Kansas State University; Dietary Fiber Fortified Instant Noodles, South Dakota State University; TruCous, Gluten-Free Couscous, Texas A&M; Burger Bites, University of Arkansas; and Crepe Up, University of Manitoba.

Alsberg-French-Schoch Memorial Lecture

Monday, September 14

1:30 – 1:50 p.m. • 310, CC

“Probing the molecular origins of starch properties: Methods and models,” presented by Mike Gidley, University of Queensland, Australia.

Exhibits with Beer, Poster Viewing, and Poster Authors

Monday, September 14

3:30 – 6:30 p.m. • Hall AB, CC
3:45 – 5:00 p.m. Poster Authors Present

Grab a beer, it’s free…and expand your knowledge area as poster authors present their latest research. Also, take time to visit the exhibits and meet with leading suppliers.

Edith A. Christensen Award Lecture

Tuesday, September 15

2:00 – 2:30 p.m. • 310, CC


Best Student Research Paper Competition

Tuesday, September 15

8:30 – 10:30 a.m. • 301, CC

See the best of the best compete in the first annual Best Student Research Paper Competition organized by the AACC International Professional Development Panel. Based on preliminary presentations, the six finalists are:

- Sean Finnie, Kansas State University, “Variation in polar lipid composition within near-isogenic wheat lines containing different puroindoline haplotypes.”
- Stephanie Moriartey, University of Alberta, “Effect of health information on the acceptability of bread fortified with barley beta-glucan.”
- Sindhu Nair, Washington State University, “Structural differences in diverse barley lines for SKCS hardness index.”
- Moustafa Saad, Université Montpellier II, “X-ray photoelectron spectroscopy analyses of wheat flour: Comparison between surface and bulk composition.”
- Catrin Tyl, University of Minnesota, “Activity-guided fractionation of cereal phytochemicals according to their antioxidative properties and their phase I enzyme modulating activity.”
- Liyi Yang, Texas A&M University, “Inhibitory effect of sorghum 3-deoxyanthocyanin structure on esophageal cancer cell proliferation in vitro.”

Awards will be given for first through third place, with awards including cash prizes, travel grants, and publication of the winning papers. Winners will be announced during the Closing Session and Farewell Reception on Wednesday afternoon.

AACC Intl. would like to thank the following sponsors for providing award funds:
- Cargill Inc.
- Danisco USA Inc.
- Flowers Foods
- Frito Lay Inc.
- General Mills Inc.
- ICL Performance Product LP
- Kraft Foods

USDA Research Funding Opportunities

Tuesday, September 15

8:30 – 10:30 a.m. • Key Ballroom 12, Hilton

AACC International is committed to advancing grain science research, but research is not possible without funding. National program leaders from USDA will provide an update on the Agriculture and Food Research Initiative (AFRI) competitive grants program that began this year, as well as other grant opportunities.

continued
Young Topic Session: Third Party and Customer Audits: A Current Perspective for Stakeholders Forum

No fee or preregistration to attend the forum for those registered for the annual meeting.

* Preregistration is required for the Milling & Baking Division Networking Luncheon ($40)

Tuesday, September 15
12:15 – 1:30 p.m. Milling & Baking Division Networking Luncheon*
(kick-off to forum)
302 – 303, CC
2:15 – 6:00 p.m. Presentations
Key Ballroom 9-10, Hilton

Continues Wednesday, September 16
9:00 a.m. – 12:00 p.m. Working Group Session
Key Ballroom 9 – 10, Hilton


Due to recent food safety issues in the United States and abroad, there is increased scrutiny on the safety of our food supply. The emphasis on food security, food safety, and recalls has led to a rapid increase in the number and types of audits that are required. As we respond to these requirements, we are faced with the challenge of maintaining food safety and retaining consumer confidence, while effectively managing overall costs and complexity.

In order to fully understand and determine security requirements for the food and beverage supply chain, leaders from various perspectives and disciplines will address third-party audit management systems and customer audits relative to the industry’s changing environment.

Key speakers for this important forum include representatives from a retailer, a food manufacturer, third-party audit programs, AIB, ISO, GFSI, and the FDA. The session will be followed by a working group discussion to address the top five issues identified during the forum and develop a task force to work toward a consensus best practice for the food and beverage industry.

Applied Research Award Lecture

Wednesday, September 16
9:30 – 9:50 a.m. • 310, CC

“Applying basic research in developing analytical solutions,” presented by Barry McCleary, Megazyme International Ireland Ltd., Ireland.

Thomas Burr Osborne Medal Lecture

Wednesday, September 16
9:30 – 10:30 a.m. • 307, CC

“Basic insights in cereal constituents as a basis for progress in cereal-based biotechnological processes,” presented by Jan Delcour, Katholieke Universiteit Leuven, Belgium.

Young Scientist Research Award Lecture

Wednesday, September 16
1:00 – 1:20 p.m. • 308, CC

“Potential influence of ferulate oligomers on physiological effects of cereal dietary fibers,” presented by Mirko Bunzel, University of Minnesota, U.S.A.

Closing Session with Keynote Speaker and Farewell Reception

“Reuse/Recycle Water Opportunities and Challenges in the Food/Bio Processing Industry Using Membrane Technology: Is This Myth or Reality?”
H. S. Muralidhara, Cargill Inc., Minneapolis, MN, U.S.A.

Wednesday, September 16
3:30 – 4:15 p.m. Closing Session and Keynote Speaker • Key Ballroom 5 – 8, Hilton
4:15 – 5:00 p.m. Farewell Reception • Key Ballroom 5 – 8, Hilton

No meeting is complete without a closing session speaker and ceremonies followed by a farewell send-off for meeting attendees. Immediately following the closing session speaker, join colleagues and friends for great conversation and light snacks and beverages as we close the 2009 Annual Meeting.

See page 39 for description of closing session keynote presentation.

Attention Young Professionals!

Tuesday, September 15
4:00 – 5:30 p.m. • Tubman B, Hilton

Get to know your colleagues while relaxing and having some fun at the Young Professionals Networking Event. Anyone 35 and younger, those new to the profession, or those who would like to network with this group are encouraged to attend.
### Schedule and Daily Highlights

All meetings take place at the Baltimore Hilton or the Baltimore Convention Center (CC) unless otherwise noted in the schedule.

#### Saturday, September 12

<table>
<thead>
<tr>
<th>Time</th>
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<tr>
<td>8:00 a.m. – 5:00 p.m.</td>
<td>Board of Directors Meeting</td>
<td>Douglass, Hilton</td>
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<tr>
<td>8:00 a.m. – 5:45 p.m.</td>
<td><strong>Short Course</strong> – Dietary Fiber in Food Systems*</td>
<td>302, CC</td>
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<tr>
<td>1:00 – 4:00 p.m.</td>
<td>Grains for Health Foundation Advisory Council Meeting</td>
<td>Stone, Hilton</td>
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*ticket required

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### Premeeting Short Course

**Dietary Fiber in Food Systems**

8:00 a.m. – 5:45 p.m. • 302, CC  
*Continues Sunday, September 13*

8:00 a.m. – 3:00 p.m. • 302, CC

Organizer: Brinda Govindarajan, Kellogg Company, Battle Creek, MI, U.S.A.  
Sponsor: Nutrition Division

With increasing consumer awareness about health and wellness, and the importance of fiber in the diet, there has been an increase in the supply of healthy fiber ingredients. Development of fiber-enriched foods poses a lot of challenges to the food scientist. As new ingredients emerge, there is a need to understand their functionality and their effects on formulation. This short course will provide up-to-date information on different fiber ingredients, their functionality in food systems, and the health, analytical, and regulatory aspects of different classes of fibers. **Preregistration is required.**

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### Show Your AACC International Pride!

**Purchase an AACC International polo shirt or t-shirt in Marketplace.**

*All proceeds benefit the Student Division*
Sunday, September 13

8:00 – 10:00 a.m.  Check Sample Committee Meeting  Tubman B, Hilton
8:00 – 11:00 a.m.  Grains for Health Foundation Board Meeting  Stone, Hilton
8:00 a.m. – 2:00 p.m.  Exhibitor Set-Up and Registration  Hall AB, CC
8:00 a.m. – 3:00 p.m.  Short Course – Dietary Fiber in Food Systems*  302, CC
(continued from Saturday)
8:30 – 10:00 a.m.  Quality of Science Committee Meeting  Tubman A, Hilton
9:30 – 11:30 a.m.  Journals Committee Meeting  Carroll A, Hilton
10:00 a.m. – 12:00 p.m.  2010 Technical Program Planning - Team Leaders Meeting  Douglass, Hilton
12:00 – 2:00 p.m.  Cereal Chemistry Editorial Board Luncheon  Marshall, Hilton
1:00 – 3:00 p.m.  Board of Directors Meeting with Committee Leaders  Key Ballroom 9, Hilton
1:00 – 4:00 p.m.  Premeeting Workshop – Dietary Fiber in Food Systems*  Key Ballroom 10, Hilton
1:00 – 6:00 p.m.  Room Available for Small Meetings  Tilghman, Hilton
1:30 – 3:30 p.m.  Premeeting Workshop – Dietary Fiber in Food Systems*  Ballroom 11, Hilton
2:00 – 3:00 p.m.  Milling & Baking Division Advisory Board Meeting  Stone, Hilton
2:00 – 3:30 p.m.  Approved Methods Technical Committee Meetings  Carroll A, Hilton
Asian Products  Paca A, Hilton
Methods for Grain and Flour Testing  Douglass, Hilton
Physical Testing Methods  Tubman A, Hilton
Protein Methods  Brent, Hilton
Oat Products  Tubman B, Hilton
Statistical Advisory  Tilghman, Hilton
Vitamins, Minerals, and Lipids  Athey, Hilton
Approved Methods Administrative Committee Meeting  Marshall, Hilton
4:00 – 7:00 p.m.  AACC International Marketplace Open  Hall AB, CC
4:00 – 7:00 p.m.  Registration Open  Hall AB, CC
4:00 – 7:00 p.m.  Grand Opening Exhibition  Hall AB, CC
*ticket required

**Premeeting Workshops**

Workshop number (W-1) refers to the Author Index in the program book.

Cereal Foods World (CFW) number refers to the abstract page location within the online searchable abstract document.

Affiliations are listed as provided by the organizer/presenter.

**Cellulosic Ethanol: Critical Constraints to Success**

Organizers/Moderators: Ron Madl, Kansas State University, Manhattan, KS, U.S.A.; Jorge Morales, Frito-Lay R&D, Plano, TX, U.S.A.

Sponsor: Engineering & Processing Division

Biofuels are assuming an increasing role in the energy resources of the United States. Use of grain as feedstock for ethanol has raised issues. Next generation biofuels will likely be derived from lignocellulosic resources. Is the technology ready? This workshop will explore issues that are raised by cellulosic ethanol beyond the knowledge base of grain-based ethanol. Collection, transportation, and storage; enzyme effectiveness; thermochemical vs. biochemical processes; and greenhouse gas emission reduction requirements for advanced biofuels are among the issues that will be addressed on this critical topic.

1:00 p.m. W-4, CFW 54:A1  Cellulosic ethanol issues overview. R. MADL, Kansas State University, Manhattan, KS, U.S.A.
1:30 p.m. W-6, CFW 54:A2  Breakthroughs in the conversion and integration of biomass technologies. C. VEIT, Novozymes North America, Inc., U.S.A.
1:50 p.m. W-7, CFW 54:A2  Improvements in enzymes for cellulosic ethanol. M. LI, Danisco, Palo Alto, CA, U.S.A.
2:10 p.m. W-8, CFW 54:A2  An integrated approach to biorefining. P. VADLANI, Kansas State University, Manhattan, KS, U.S.A.
2:30 p.m. Break and poster review with questions.*

**Workshop Posters:**

**Poster 1**
Soft carbohydrates in culm of rice straw as new substrate for bioethanol production. Ken Tokuyasu (1). (1) Carbohydrate Laboratory, National Food Research Institute, Tsukuba, Ibaraki, Japan

**Poster 2**
Improved glucose recovery from hydrolysis of rice straw for bioethanol production using fungal enzymes. Sathaporn Srichuwong (1). (1) National Food Research Institute, Tsukuba, Ibaraki, Japan

**Poster 3**
Cellulolytic Enzyme System Production in Mixed Fungal Culture and its Utilization for Lignocellulosic Biomass Hydrolysis. Khushal Brijwani (1), Harinder Singh Oberoi (1), Praveen V. Vadlani (1). (1) Department of Grain Science and Industry, Kansas State University, Manhattan, KS, U.S.A.

**Poster 4**
Novel Thermo-mechanical Pretreatment of Lignocellulosic Biomass for Efficient Ethanol Production from Agricultural Residues. Juhyun Yoo (1), Sajid Alavi (1), Praveen Vadlani (1), Vincent Amanor-Boadu (2), Harinder Singh Oberoi (1). (1) Department of Grain Science and Industry, Kansas State University, Manhattan, KS, U.S.A.; (2) Department of Agricultural Economics, Kansas State University, Manhattan, KS, U.S.A.

**Poster 5**
Evaluation of Waxy Grain Sorghum for Ethanol Production. Shuping Yan (1, 2), Xiaorong Wu (1), Scott Bean (3), Jeff Pedersen (4), Tesfaye Tesso (5), Yuanhong Chen (3), Donghai Wang (1). (1) Department of Biological and Agricultural Engineering, Kansas State University, Manhattan, KS, U.S.A.; (2) Department of Grain Science and Industry, Kansas State University, Manhattan, KS, U.S.A.; (3) USDA-ARS Grain Marketing and Production Research Center, Manhattan, KS, U.S.A.; (4) USDA-ARS Grain, Forages and Bioenergy Research, University of Nebraska, Lincoln, NE, U.S.A.; (5) Department of Agronomy, Kansas State University, Manhattan, KS, U.S.A.

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**An Emerging Scholarship of Cross-Cultural Engagement**

Organizers: Craig Hassel, University of Minnesota, St. Paul, MN, U.S.A.; Len Marquart, University of Minnesota, St. Paul, MN, U.S.A.

Moderator: Craig Hassel, University of Minnesota, St. Paul, MN, U.S.A.

Sponsor: University of Minnesota

Every human society has developed its own ways of knowing food and health relationships as matters of survival and sustainability. An emerging scholarship asks professional scientists to develop skills in cross-cultural engagement (CCE). CCE prepares scientists to respectfully access foreign ways of producing knowledge of food and health that lie outside the orthodoxy of their professional training. Participants will hear the theories of Classical Chinese Medicine and experience the worldviews described by Indigenous healers. Shifting cultural perspective allows for knowledge otherwise incomprehensible to become more empathetically understood; it allows the presuppositions and paradigms of scientific thinking to become more visible; it can ultimately lead to broader and more innovative forms of scientific inquiry.

1:30 p.m. W-1, CFW 54:A1
Fundamentals of Chinese medical theory. C. HAFNER, Crocus Hill Oriental Medicine, St. Paul, MN, U.S.A.

2:00 p.m. W-2, CFW 54:A1
Culture and healing for all people. P. SCHULTZ, White Earth Tribal College, Mahnomen, MN, U.S.A.

2:30 p.m. W-3, CFW 54:A1
Discussion: An emerging scholarship of cross-cultural engagement. C. HASSEL, University of Minnesota, St. Paul, MN, U.S.A.

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**Third-Party and Customer Audits: A Current Perspective for Stakeholders Forum**

Don’t miss this opportunity to learn straight from the experts!

No fee or pre-registration to attend for those registered for the annual meeting.

**Tuesday, September 15**
2:15 – 6:00 p.m.
Presentations

**Wednesday, September 16**
9:00 a.m. – 12:00 p.m.
Working Group Session

Speakers from Cargill, Inc., Kellogg Company, AIB International, GFSI, SQF, FDA, and more will present a truly global perspective on the complex and highly specialized audit system in the food processing industry.

See page 31 for a full description of this session.
Monday, September 14

7:00 – 7:45 a.m. Grains for Health Foundation Breakfast Meeting Marshall, CC
7:00 – 8:00 a.m. Mentoring Kick-off Event  Key Ballroom 5 – 8, Hilton Hall AB, CC
7:00 – 10:00 a.m. Poster Set-up by Authors Tilghman, Hilton
7:00 a.m. – 5:00 p.m. Room Available for Small Meetings Key Ballroom 5 – 8, Hilton Hall AB, CC
7:15 – 8:00 a.m. Light Breakfast and Coffee Served Prior to the Opening General Session Key Ballroom 5 – 8, Hilton
7:30 a.m. – 5:30 p.m. Opening General Session and Awards Ceremony with Breakfast Foods and Coffee. Breakfast items donated by General Mills, Inc. Hall AB, CC
9:00 a.m. – 3:00 p.m. Bookstore Open Main Terrace, Level 300, CC
9:30 – 11:30 a.m. Scientific Sessions focused on the 7 Key Scientific Initiatives 307, CC
10:00 a.m. – 1:00 p.m. Student Product Development Competition Presentations 302 – 303, CC
10:00 a.m. – 6:30 p.m. Poster Viewing Hall AB, CC
11:30 a.m. – 1:30 p.m. Lunch Break – Cash Concessions Available Key Ballroom 12, Hilton
12:30 – 1:30 p.m. Whole Grain Task Force Key Ballroom 5 – 8, Hilton Hall AB, CC
1:00 p.m. – 5:00 p.m. Student Product Development Competition Posters Hall AB, CC
1:30 – 3:30 p.m. Scientific Sessions focused on the 7 Key Scientific Initiatives 307, CC
2:00 – 3:30 p.m. Student Division Business Meeting Key Ballroom 10, Hilton
3:30 – 6:30 p.m. AACC International Marketplace Open Hall AB, CC
3:30 – 6:30 p.m. Beer and Poster Viewing Hall AB, CC
3:30 – 6:30 p.m. Poster Authors Present 3:45 – 5:00 p.m. Hall AB, CC
5:00 – 6:00 p.m. Cereals & Europe Section Dinner* Phillips Harborside Restaurant
7:00 – 9:00 p.m. Cereals & Europe Section Dinner* Germano’s Trattoria
7:00 – 11:00 p.m. Student Division Social and Dinner*

*ticket required
As the demand for sustainable energy resources increases, researchers have focused much attention on the plausibility of using crop plants as sources of renewable energy through production of biofuels from grain and/or cellulosic feedstocks. Over the next ten years, the demand for biofuels is expected to increase dramatically, raising questions about how biofuel production will affect the agricultural industry as a whole and the impact it will have on consumers. Developing biofuels as a sustainable energy resource places new stresses and pressures on the agriculture industry, emphasizing the need for sustainable production of all commodities used as food, feed, fiber and/or fuel. Increasing demand and competition for grain, energy, water, and other natural resources has raised concerns about the economic, social, and environmental impacts and ethical aspects of incorporating biofuel options to meet energy needs. Particularly for maize, identifying synergy between biofuels and food production remains a laudable goal for a sustainable agricultural industry. Genetic engineering and biotechnology provide venues for implementation of good management practices, improved agricultural sustainability, and minimizing of negative impacts on the environment. Using maize as an example, this symposium provides a systems-based overview of the tension between biofuels and food production, identifies the need for greater diversity of crops, and addresses the need for science-based policies to increase production in a sustainable way.
Technical Sessions – Monday Morning

Technical number (O-1) refers to the Author Index in the program book.

Cereal Foods World (CFW) number refers to abstract page location within the online searchable abstract supplement.

Affiliations are listed as provided by the organizer/presenter.

Engineering & Processing

Dough Structure and Rheology • 308, CC
Moderator: Sajid Alavi, Kansas State University, Manhattan, KS, U.S.A.

9:30 a.m. O-1, CFW 54:A22
Behaviour of prefermented dough during refrigeration: Impact of CO2 solubility on gas cell equilibrium. A. LE BAIL (1), F. Ben-Aissa (2), G. Domagoj (3), D. Curic (3), J. Monteau (1). (1) ENITIAA, UMR GEPEA (CNRS 6144), Université de Nantes, Nantes Atlantique, Nantes, France; (2) Zagreb University, PBH, Zagreb, Croatia

9:50 a.m. O-2, CFW 54:A26
Study of gas cells during proofing and baking using biaxial rheology and X-ray microtomography. M. PICKETT (1), H. Dogan (1). (1) Kansas State University, Manhattan, KS, U.S.A.

10:10 a.m. O-3, CFW 54:A27
Combining low frequency ultrasound with large strain techniques to evaluate the properties of wheat flour doughs. M. G. SCANLON (1), J. H. Page (1), Y. Fan (1), A. Kiefte (1), K. L. Mehta (1). (1) University of Manitoba, Winnipeg, MB, Canada

10:30 a.m. O-4, CFW 54:A27
Influence of glycolipids on the technological properties of wheat dough. P. L. SELMAIR (1), P. Koehler (1). (1) German Research Centre for Food Chemistry, Garching, Germany

10:50 a.m. O-5, CFW 54:A27
Effect of ozonated wheat flour on bread quality. H. S. SANDHU (1), F. A. Manthey (1). (1) North Dakota State University, Fargo, ND, U.S.A.

11:10 a.m. O-6, CFW 54:A15
Comparison of rheological properties of gluten modified with changes in surface tension and disulfide linkages. A. A. AMBARDEKAR (1), P. Kalyanaraman (1), S. Mulvaney (2), P. Rayas-Duarte (1). (1) Robert M. Kerr Food & Agricultural Products Center, Oklahoma State University, Stillwater, OK, U.S.A.; (2) Department of Food Science, Cornell University, Ithaca, NY, U.S.A.

11:30 a.m. O-7, CFW 54:A25
The impact of redox agents on sugar-snap cookie quality. B. PAREYT (1), K. Brijs (1), J. A. Delcour (1). (1) Laboratory of Food Chemistry and Biochemistry and Leuven Food Science and Nutrition Research Centre (LFoRCe), Katholieke Universiteit Leuven, Belgium

Towards Healthier Foods • 310, CC
Moderator: Jody Mattsen, Cargill, Inc., Plymouth, MN, U.S.A.

9:30 a.m. O-8, CFW 54:A29
Potential applications of kafirin microparticles. J. TAYLOR (1), J. Taylor (1). (1) University of Pretoria, Pretoria, South Africa

9:50 a.m. O-9, CFW 54:A20

10:10 a.m. O-10, CFW 54:A28
WITHDRAWN

10:30 a.m. O-11, CFW 54:A18
Characterisation and functionality of brewers’ spent grain proteins and their hydrolysates. I. CELUS (1), K. Brijs (1), J. A. Delcour (1). (1) Laboratory of Food Chemistry and Biochemistry & Leuven Food Science and Nutrition Research Centre (LFoRCe), Katholieke Universiteit Leuven, Belgium

10:50 a.m. O-12, CFW 54:A22
Naked barley – A rediscovered source for functional foods! M. KINNER (1), S. Siebenhandl-Ehn (1), H. Grausgruber (1), K. Huber (1), S. Nitschko (1), M. Prückler (1), M. Poppernitsch (1), E. Berghofer (1). (1) University of Natural Resources and Applied Life Sciences, Vienna, Austria

11:10 a.m. O-13, CFW 54:A25
Saltiness enhancement in bread by inhomogeneous spatial distribution of salt. M. NOORT (1), M. Stieger (2), R. Hamer (1). (1) TI Food & Nutrition (formerly known as Wageningen Centre for Food Sciences), Wageningen/TNO Quality of Life, Zeist, The Netherlands; (2) TI Food & Nutrition (formerly known as Wageningen Centre for Food Sciences), Wageningen/NIZO Food Research, Ede, The Netherlands

11:30 a.m. O-14, CFW 54:A29
Barley limit dextrinase and its interaction the proteinaceous barley limit dextrinase inhibitor. B. SVENSSON (1), M. B. Vester-Christensen (1), J. M. Jensen (1), P. Hagglund (1), M. Abou Hachem (1). (1) Enzyme and Protein Chemistry, Department of Systems Biology, Technical University of Denmark
Cereal Foods World (CFW) number refers to abstract page location within the online searchable abstract document.

Affiliations are listed as provided by the organizer/presenter.

Cereal Grain Components: Analysis and Bioavailability • 307, CC


Moderators: Mirko Bunzel, University of Minnesota, St. Paul, MN, U.S.A.; E.Sayed Abdel-Aal, Agriculture and Agri-Food Canada, Guelph, ON, Canada

Sponsors: Bioactive Compounds Committee and Grains for Health Foundation

Financial Sponsors: University of Minnesota, CFANS; Grains for Health Foundation

Grain foods are rich sources of potential bioactive components. Whether whole grains, dietary fiber or low molecular weight bioactive components (partially attached to fibers) elicit health benefits have not been fully elucidated. It also remains unknown how results from in vitro measurements of grain components and their effects in antioxidant and cell culture tests translate into effects on human health. There is little information about the breakdown and release of grain components through enzymatic action as they pass through the digestive tract. Microbial metabolism of general grain components will be explored in the lower GI tract. Whether various phenolic compounds are metabolized and absorbed into the body will be another topic addressed. An expert panel will address gaps in the literature and recommendations for focusing and prioritizing research efforts in the measurement and bioavailability of grain components.

1:30 p.m.  S-13, CFW 54:A5
Fiber and/or phenolics: Preventive compounds in cereal grains? L. R. FERGUSON (1). (1) The University of Auckland, Auckland, New Zealand

1:50 p.m.  S-14, CFW 54:A5
Challenges in the analysis of bioactive compounds in grains. E. S. M. ABDEL-AAL (1), J. C. Young (1). (1) Agriculture and Agri-Food Canada, Guelph Food Research Centre, Guelph, ON, Canada

2:00 p.m.  S-15, CFW 54:A5
In-vitro tests for antioxidant activity: Effective tools to evaluate health benefits of cereal grains? V. FOGLIANO (1). (1) Universita degli Studi di Napoli Federico II, Portici-Napoli, Italy

2:20 p.m.  S-17, CFW 54:A6
Enzymatic liberation of ferulate derivatives in the human GI tract. C. B. FAULDS (1). (1) Centro de Investigaciones Biológicas (CIB), Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain

2:30 p.m.  S-18, CFW 54:A6
Conversion of grain phenolics by human intestinal microbiota. A. BRAUNE (1). (1) Department of Gastrointestinal Microbiology, German Institute of Human Nutrition Potsdam-Rehbruecke, Nuthetal, Germany

2:40 p.m.  Panel discussion

Health Claims and Use of Dietary Fibers in Cereal Products • 309, CC

Organizers/Moderators: Bruce Hamaker, Purdue University, West Lafayette, IN, U.S.A.; Jan de Vries, CSM, Diemen, The Netherlands

Sponsor: Carbohydrate Division

This session is intended to create awareness for the audience on the amount of scientific evidence that is needed to substantiate health claims. A more detailed description will be given from the governmental perspective on what is needed to avoid consumers being mislead. The nutritional framework the approach of regulations is built on will be described. Furthermore, the consequences for product development to meet incorporation levels able to comply to dietary fiber guidelines will be discussed in detail. The session is organized for discussion, with the last hour available for discussion on the basis of the specific proposition.

1:30 p.m.  S-19, CFW 54:A8
Scientific evaluation for health claims and qualified health claims. K. C. ELLWOOD (1). (1) FDA, Center for Food Safety and Applied Nutrition, Washington, DC, U.S.A.

2:00 p.m.  S-20, CFW 54:A8
Whole grain and dietary fiber health claims: An industry perspective. K. WIEMER (1). (1) General Mills Bell Institute of Health & Nutrition, Minneapolis, MN, U.S.A.

2:20 p.m.  S-21, CFW 54:A8
Fiber enriched products – Challenges for product developers related to label claims guidelines. B. GOVINDARAJAN (1). (1) Kellogg Company, Battle Creek, MI, U.S.A.

2:40 p.m.  Panel discussion
Biotechnology & Sustainability

Rice Sustainability • 301, CC
Moderator(s): TBD

1:30 p.m. O-15, CFW 54:A19
Improving the well-being of rice farmers and consumers by improving the tools to select for quality. M. FITZGERALD (1). (1) Intl. Rice Research Institute, Metro Manila, Philippines

1:50 p.m. O-16, CFW 54:A31

2:10 p.m. O-17, CFW 54:A23

2:30 p.m. O-18, CFW 54:A25
Hybrid rice improves sustainability. B. OTTIS (1). (1) RiceTec, Inc., Sikeston, MO, U.S.A.

2:50 p.m. O-19, CFW 54:A28

3:10 p.m. O-20, CFW 54:A16
Rice sustainability will require enhanced grain nutrient profiles. C. BERGMAN (1), A. McClung (2), E. T. Champagne (3), C. C. Grimm (3), M. Chen (4). (1) Department of Food and Beverage Management, University of Nevada, Las Vegas, NV, U.S.A.; (2) Dale Bumpers National Rice Research Center, Stuttgart, AR, U.S.A.; (3) Food Processing and Sensory Quality Research, USDA, New Orleans, LA, U.S.A.; (4) USDA, Beaumont, TX, U.S.A.

3:30 p.m. O-21. WITHDRAWN

Molecular Origins of Starch Properties • 310, CC
Moderator(s): TBD

1:30 p.m. O-22, CFW 54:A20
Probing the molecular origins of starch properties: Methods and models. (Alsberg-French-Schoch Memorial Lecture). M. GIDLEY (1). (1) Centre for Nutrition and Food Sciences, The University of Queensland, St. Lucia, Brisbane, Australia

1:50 p.m. O-23, CFW 54:A25
Role of starch granule surface components in pasting. D. NATH DE OLIVEIRA (1), S. Finnie (1), M. Giroux (2), J. Faubion (1). (1) Kansas State University, Manhattan, KS, U.S.A.; (2) Montana State University, Bozeman, MT, U.S.A.

2:10 p.m. O-24, CFW 54:A31
Preparation and properties of reversibly swellable starches. K. WOO (1), P. A. Seib (2). (1) MGP Ingredients Inc., Atchison, KS, U.S.A.; (2) Kansas State University, U.S.A.

2:30 p.m. O-25, CFW 54:A17
Influence of starch structure on the swelling and leaching of starch microparticles. N. BORDENA VE (1), Y. Yao (1). (1) Purdue University, West Lafayette, IN, U.S.A.

2:50 p.m. O-26, CFW 54:A26
Amylose-lipid complexes as additives in starch-based food systems. J. A. PUTSEYS (1), L. Lambert (1), J. A. Delcour (1). (1) Laboratory of Food Chemistry and Biochemistry and Leuven Food Science and Nutrition Research Centre (LFoRCe), Katholieke Universiteit Leuven, Belgium

3:10 p.m. O-27, CFW 54:A16
Molecular composition of acid-resistant crystals obtained from waxy maize starch granules. E. BERTOFT (1), S. P rez (2), H. Angellier-Coussy (3), J. Putaux (2), S. Molina-Boisseau (2), A. Dufresne (4). (1) Swedish Univ. of Agricultural Sciences, Uppsala, Sweden; (2) CERMAV-CNRS, Grenoble, France; (3) Université Montpellier II, Montpellier, France; (4) Fugora Grenoble INP, Saint Martin d’Hères, France

3:30 p.m. O-28, CFW 54:A30
Nonfood Uses of Plant-Based Materials

Moderator: Vijay Singh, University of Illinois, Urbana-Champaign, Urbana, IL, U.S.A.

1:30 p.m.  O-29, CFW 54:A21
Ethanol production from hard and soft endosperm corn types. E. KHULLAR (1), E. D. Sall (2), K. D. Rausch (1), M. Tumbleson (1), V. Singh (1). (1) University of Illinois, Urbana-Champaign, Urbana, IL, U.S.A.; (2) Monsanto Company, St. Louis, MO, U.S.A.

1:50 p.m.  O-30, CFW 54:A21
Enzymatic and process technologies to increase corn dry grind slurry solids. P. KAUR (1), K. D. Rausch (1), M. E. Tumbleson (1), V. Singh (1). (1) University of Illinois, Urbana-Champaign, Urbana, IL, U.S.A.

2:10 p.m.  O-31, CFW 54:A31
Evaluation of waxy grain sorghum for ethanol production. S. YAN (1), X. Wu (2), S. Bean (3), J. Pederson (4), T. Tess (5), R. Chen (4), D. Wang (2). (1) Kansas State University, Manhattan, KS, U.S.A.; (2) Kansas State University, Biological and Agricultural Engineering, Manhattan, KS, U.S.A.; (3) USDA-ARS Grain Marketing and Production Research Center, Manhattan, KS, U.S.A.; (4) USDA-ARS Grain, Forages, and Bioenergy Research, University of Nebraska, Lincoln, NE, U.S.A.; (5) Department of Agronomy, Kansas State University, Manhattan, KS, U.S.A.

2:30 p.m.  O-32, CFW 54:A31
Novel thermo-mechanical pretreatment of lignocellulosic biomass for efficient ethanol production from agricultural residues. J. YOO (1), S. Alavi (1), P. Vadlani (1), V. Amanor-Boadu (1). (1) Kansas State University, Manhattan, KS, U.S.A.

2:50 p.m.  O-33, CFW 54:A29
Effect of fractionation of distillers dried grains with solubles (DDGS) on pelleting characteristics of broiler diets. R. SRINIVASAN (1), A. Corzo (1), K. Koch (2), M. Kidd (1). (1) Mississippi State University, Mississippi State, MS, U.S.A.; (2) Northern Crops Institute, Fargo, ND, U.S.A.

3:10 p.m.  O-34, CFW 54:A29
Mechanical and barrier property modeling of starch, polyvinyl alcohol-based nanocomposites and their characterization. X. TANG (1), S. Alavi (1), S. Shaur (1), J. Faubion (1). (1) Kansas State University, Manhattan, KS, U.S.A.

3:30 p.m.  O-35, CFW 54:A15
Fundamental studies on molecular interactions in starch/PVOH/clay nanocomposites used for making biodegradable packaging films. S. S. ALI (1), X. Tang (1), S. Alavi (1), J. Faubion (1). (1) Kansas State University, Manhattan, KS, U.S.A.

Monday p.m.

Attend AACC International Short Courses

“A short amount of time will impact a life long career.”

Breakfast Cereals
October 5–7, 2009
Kansas City, MO

Statistics for the Food Professional
November 9–11, 2009
St. Paul, MN

School Nutrition
November 2009
Minneapolis, MN

Food Extrusion
March 8–10, 2010
Peterborough, England

Visit the Continuing Education Center at www.aaccnet.org.
Tuesday, September 15

7:00 – 8:00 a.m. Cincinnati Section Meeting and Breakfast Cincinnati Section Meeting and Breakfast* Diamond Tavern, Hilton
7:00 – 8:00 a.m. Engineering & Processing Division Meeting and Breakfast* 305, CC
7:00 – 8:00 a.m. Past Presidents Breakfast Armistead, Hilton
7:00 – 8:30 a.m. Approved Methods Technical Committee Meetings
Biotechnology Methods Brent, Hilton
Enzyme Analysis Carroll A, Hilton
Near Infrared Analysis Paca A, Hilton
Pasta Products Analysis Stone, Hilton
Rice Milling and Quality Tubman B, Hilton
Soft Wheat and Flour Products Douglass, Hilton
Yeast Evaluation Marshall, Hilton

7:00 – 8:30 a.m. Education Division Meeting 306, CC
7:00 a.m. – 5:00 p.m. Room Available for Small Meetings Tilghman, Hilton
7:30 a.m. – 4:00 p.m. Registration Open Hall AB, CC
8:00 a.m. – 2:00 p.m. Poster Viewing Hall AB, CC
8:30 – 10:30 a.m. Best Student Research Paper Competition Key Ballroom 12, Hilton

8:30 – 10:30 a.m. Scientific Sessions focused on the 7 Key Scientific Initiatives
Cereal & Polymer Chemistry – Chemistry and Structure 308, CC
Health & Nutrition – The Effects of Dietary Fiber from Cereals on Gut Health 309, CC
Biotechnology & Sustainability – Technical Session: Breeding and Bioconversion of Plants for Sustainability 307, CC

8:30 – 10:30 a.m. Supplier Innovation Session I, see page 31 304, CC
10:00 – 1:00 a.m. Foundation Board Meeting Calloway B, Hilton
10:30 a.m. – 2:00 p.m. AACC International Marketplace Open Hall AB, CC
10:30 a.m. – 2:00 p.m. Coffee at the Exhibits and Poster Viewing Hall AB, CC

2:00 – 4:00 p.m. Scientific Sessions focused on the 7 Scientific Initiatives
Cereal & Polymer Chemistry – Replacing Gluten Functionality 307, CC
Engineering & Processing – Advances in Delivery of Food Nutrients – Tailoring Process Operations for Health and Wellness 308, CC
Quality & Analytical Methods – Technical Session: Analysis of Fiber and Nutritional Quality (includes 2009 Edith A. Christensen Award Lecture) 310, CC

2:00 – 4:00 p.m. Supplier Innovation Session II, see page 31 304, CC
2:00 – 5:00 p.m. Bookstore Open Main Terrace, Level 300, CC
2:00 – 6:00 p.m. Exhibit Take-Down Hall AB, CC
2:00 – 6:00 p.m. Poster Take-Down Hall AB, CC
(continues Wednesday, 9:00 a.m. – 12:00 p.m.)

3:00 – 4:00 p.m. New Products Task Force Armistead, Hilton
4:00 – 5:00 p.m. Protein Division Business Meeting* Douglass, Hilton
4:00 – 5:30 p.m. Young Professionals Event* Tubman B, Hilton
4:00 – 6:00 p.m. 2010 Technical Program Planning Meeting Blake, Hilton
4:30 – 5:30 p.m. Carbohydrate Division Meeting Key Ballroom 11, Hilton
4:45 – 6:00 p.m. Iowa State University and Friends Reception* Lobby Bar, Hilton
5:00 – 6:00 p.m. Protein Division Social* Tubman A, Hilton
5:15 – 8:00 p.m. Biotechnology Division Meeting and Dinner* Rusty Scupper Restaurant
6:30 – 9:00 p.m. Carbohydrate Division Dinner* Phillips Harborable Restaurant
7:00 – 9:30 p.m. Rice Division Dinner*
*ticket required
AACC International is committed to advancing grain science research, but research is not possible without funding. National program leaders from USDA will provide an update on the Agriculture and Food Research Initiative (AFRI) competitive grants program that began this year, as well as other grant opportunities.

8:30 a.m. Opening remarks: Overview of CSREES transition to the National Institute of Food and Agriculture and Competitive Grants Programs, Debby Sheely, Deputy Administrator, CSREES*

8:45 a.m. Plant biology, plant genome, genetics, and breeding. Ed Kaleikau, National Program Leader, CSREES*

9:00 a.m. Improving food quality and value. Ram Rao, National Program Leader, CSREES*

9:15 a.m. Bioactive food components for optimal health, Dionne Toombs, National Program Leader, CSREES*

9:30 a.m. Human nutrition and obesity. Susan Welsh, National Program Leader, CSREES*

9:45 a.m. Nanoscale science and engineering. Hongda Chen, National Program Leader, CSREES*

10:00 a.m. Small business innovation research. Dionne Toombs, National Program Leader, CSREES*

10:15 a.m. Panel: Question and answer.

* Cooperative State Research, Education and Extension Service (CSREES) Funding Programs Related to Cereal Chemistry and Processing.

The Effects of Dietary Fiber from Cereals on Gut Health

Organizers: Jan de Vries, CSM, Diemen, The Netherlands; Bruce Hamaker, Purdue University, West Lafayette, IN, U.S.A.

Sponsor: Carbohydrate Division

Financial Sponsor: General Mills, Inc.

Dietary fiber from cereals are a complex group of substances with an even more complex effect on human physiology. This symposium intends to give more insight on the possible effects of dietary fiber from cereals on the physiological function of the gut. Presentations will include interactions of dietary fiber from cereals with the epithelium of the gut and with the microflora of the colon. In addition, an example of a dietary fiber will be discussed in more detail. There will be ample time to discuss the consequences of high-fiber cereal products on gut health.

8:30 a.m. S-22, CFW 54:A7

Genetics of maize, sorghum, rice, and barley – An overview of comparative properties of cereal seed proteins. P. SHEWRY (1). (1) Rothamsted Research, Herts, United Kingdom

8:50 a.m. S-23, CFW 54:A7

Novel methods for separation and characterization of proteins from non-wheat cereals. M. TILLEY (1). (1) USDA-ARS, Manhattan, KS, U.S.A.

9:10 a.m. S-24, CFW 54:A7

Biochemistry, structure, and function of non-wheat proteins: Case study of barley β-amylase. C. HENSON (1). (1) USDA-ARS, Madison, WI, U.S.A.

9:30 a.m. S-25, CFW 54:A7

The proteins of rye grain – Classification, analysis, and functionality. P. KOEHLER (1). (1) Deutsche Forschungsanstalt fuer, Garching, Germany

9:50 a.m. S-26, CFW 54:A7

Kafirin and zein disulfide bonding: Its negative and positive effects on sorghum and maize nutritional and functional properties. J. TAYLOR (1). (1) University of Pretoria, Pretoria, Republic of South Africa

10:10 a.m. S-27, CFW 54:A7

Industrial extraction and utilization of zein. G. SELLING (1). (1) USDA-ARS, Peoria, IL, U.S.A.
9:30 a.m.  S-30.  Effects of arabinoxylan oligosaccharides on the gut. C. COURTIN (1). (1) University of Leuven, Heverlee, Belgium

10:00 a.m.  S-31.  Cereal dietary fibers and gut microbiota. D. ROSE (1). (1) USDA ARS NCAUR, Peoria, IL, U.S.A.

Technical Sessions – Tuesday Morning

Technical number (O-1) refers to the Author Index in the program book.  
Cereal Foods World (CFW) number refers to abstract page location within the online searchable abstract supplement.  
Affiliations are listed as provided by the organizer/presenter.

Biotechnology & Sustainability

Breeding and Bioconversion of Plants for Sustainability • 307, CC

Moderator: Aaron Reed, Cargill, Inc., Plymouth, MN, U.S.A.

8:30 a.m.  O-42, CFW 54:A23  
Combining quality and yield: Overcoming barriers to adoption for specialized grains. M. K. MORELL (1), Z. Li (1), J. Ral (1), A. Regina (1), G. J. Tanner (1), C. Howitt (1). (1) CSIRO, Canberra, ACT, Australia

8:50 a.m.  O-43, CFW 54:A20  
Utility of promoter sequence variation in plant breeding. A. FURTADO (1), R. J. Henry (1). (1) Southern Cross University, Lismore, NSW, Australia

9:10 a.m.  O-44, CFW 54:A17  
Isogenic wheat discrimination via in situ FT-IR microspectroscopy and imaging. L. R. BREWER (1), D. L. Wetzel (1). (1) Microbeam Molecular Spectroscopy Laboratory, Kansas State University, Manhattan, KS, U.S.A.

9:30 a.m.  O-45, CFW 54:A17  
Cellulolytic enzyme system production in mixed fungal culture and its utilization for lignocellulosic biomass hydrolysis. K. BRIJWANI (1), H. S. Oberoi (1), P. V. Vadlani (1). (1) Kansas State University, Manhattan, KS, U.S.A.

9:50 a.m.  O-46, CFW 54:A28  
Improved glucose recovery from hydrolysis of rice straw for bioethanol production using fungal enzymes. S. SRICHUWONG (1), M. Ike (1), M. Fujiwara (1), L. Wu (1), J. Park (1), Y. Arai-Sanoh (2), M. Kondo (2), K. Tokuyasu (1). (1) National Food Research Institute, Tsukuba, Ibaraki, Japan; (2) National Institute of Crop Science, Tsukuba, Ibaraki, Japan

10:10 a.m.  O-47, CFW 54:A30  
Soft carbohydrates in culm of rice straw as new substrate for bioethanol production. K. TOKUYASU (1), S. Srichuwong (1), M. Ike (1), M. Arakane (1), T. Seyama (1), S. Riki (1), Y. Arai-Sanoh (2), M. Kondo (2), J. Park (1). (1) National Food Research Institute, Tsukuba, Ibaraki, Japan; (2) National Institute of Crop Science, Tsukuba, Ibaraki, Japan

10:30 a.m.  O-48, CFW 54:A18  
Prediction of fermentable starch content of corn by near-infrared spectroscopy. A. BURGERS (1), C. R. Hurburgh (1). (1) Iowa State University, Ames, IA, U.S.A.
Supplier Innovation Sessions – Tuesday Morning

Session 1 • 304, CC

8:30 – 9:00 a.m.
Company: Pertem Instruments
Name of Product: New Analysis Tools for Cereal Chemists
Contact: Wes Shadow
Category: Instruments/Equipment/Services

Two new tools for qualitative and quantitative analysis of breeder samples.

9:10 – 9:40 a.m.
Company: SunOpta Ingredients
Name of Product: Barley Balance Beta-Glucan Concentrate
Contact: Laura Cooper
Category: Ingredients

Barley Balance has five key health benefits: cholesterol lowering, satiety and weight control, blood glucose modulation, immunity, and digestive health.

9:50 – 10:20 a.m.
Company: 21st Century Grain Processing
Name of Product: Coated Grains, Cereal Clusters, and Oats
Contact: Janice Lambert
Category: Ingredients

Innovative ingredient applications with whole grains and grain combinations in energy bars, topicals, nutraceuticals, confectionery, dairy, cereals, and snacks inclusions.

Hot Topic Session – Tuesday Afternoon

Third Party and Customer Audits: A Current Perspective for Stakeholders • Key Ballroom 9 – 10, Hilton

Due to recent food safety issues within the U.S. and abroad, there is increased scrutiny on the safety of our food supply. The emphasis on food security, food safety, and recalls has led to a rapid increase in the number and types of audits that are required. As we respond to these requirements, we are faced with the challenge of maintaining food safety and retaining consumer confidence, while effectively managing overall costs and complexity. In order to fully understand and determine security requirements for the food and beverage supply chain, leaders from various perspectives and disciplines will address third party audits and Hazard Analysis & Critical Control Points (HACCP) management systems vs. the industry’s changing environment. The session will be followed by a working group discussion on Wednesday to address the top five issues identified during the forum and develop a task force to work toward a consensus best practice for the food and beverage industry.

3:15 p.m. Retailer's perspective on food safety, audits and maintaining consumer confidence (Speaker TBA)
3:45 p.m. Break
4:00 p.m. GFSI - A global vision for food safety. Kathy Wybourn, Director Food Safety Solutions, DNV Business Assurance US
4:20 p.m. Third party audits & AIB. Maureen Olewnik, VP, AIB International
4:40 p.m. ISO 22000 – A relatively new audit for the food industry which has been added as an acceptable audit to qualify as GFSI, Kathy Wybourn, Director Food Safety Solutions, DNV Business Assurance US
5:00 p.m. Third party audit supplier – SQF. John F. Schulz, Food Marketing Institute
5:20 p.m. Public health at the FDA. Joshua M. Sharfstien, Principal Deputy Commissioner, FDA

Sessions – Tuesday Afternoon

Session numbers (S-1) refers to the Author Index in the program book.

Cereal Foods World (CFW) number refers to abstract page location within the online searchable abstract document.

Affiliations are listed as provided by the organizer/presenter.

Cereal & Polymer Chemistry

Replacing Gluten Functionality • 307, CC
Organizers: Baninder S. Sroan, Frito Lay, Plano, TX, U.S.A.; Scott Bean, USDA ARS, Manhattan, KS, U.S.A.; Martin G. Scanlon, University of Manitoba, Winnipeg, MB, Canada
Moderators: Baninder S. Sroan, Frito Lay, Plano, TX, U.S.A.; Tilman Schober, USDA ARS GMPRC, Manhattan, KS, U.S.A.
Sponsor: Protein Division; Rheology Division

This symposium is broad spectrum in terms of initiatives for the 2009 Annual Meeting. Apart from cereal and polymer chemistry, its contents include nutrition, food safety, and rheology. Approximately 1% of the world population suffers from autoimmune response to gluten peptides known as celiac disease. The demand for gluten-free products is greater than the said population share, as people opt for the “gluten-free” label for various other medical and nonmedical reasons. The increase in sales of gluten-free baked products was more than 50% in 2007. This symposium provides an opportunity to learn about biochemical basis of celiac disease, methods to detect allergenic peptides, understanding of functional requirements of various leavened products, and developments to replace gluten functionality. Current advances not only provide opportunity to tap the “gluten-free” market but also to employ nutritional value of underutilized food crops.

2:00 p.m. S-32, CFW 54:A11
Evaluation of risk of different dietary proteins for celiac disease patients. A. M. CALDERON DE LA BARCA (1). (1) Centro de Investigacion en Alimentacion y Desarrollo, A.C., Hermosillo, Mexico

2:20 p.m. S-33, CFW 54:A11
Replacing gluten: Requirements to produce leavened products. B. S. SROAN (1), F. MacRitchie
Tuesday p.m.

2:40 p.m.  S-34, CFW 54:A12
Potential of prolams from maize and sorghum to form gluten-like structures in wheat-free bread. T. SCHOBER (1), S. R. Bean (1). (1) USDA ARS-GMRC, Manhattan, KS, U.S.A.

3:00 p.m.  S-35, CFW 54:A12
Rheological characterization of gluten-free systems. O. POLENGHI (1), V. Cerne (1). (1) Schar R&D Centre, Trieste, Italy

3:20 p.m.  S-36, CFW 54:A12

3:40 p.m.  S-37, CFW 54:A12
Texture and cereal protein functionality. B. R. HAMAKER (1), C. D. Mejia (1), M. A. Goodall (1), B. A. Bugusu (1). (1) Department of Food Science, Purdue University, West Lafayette, IN, U.S.A.

2:20 p.m.  S-40, CFW 54:A3
High incorporation of cereal bran fibers into foods. B. R. HAMAKER (1), D. Pai (1), O. H. Campanella (1). (1) Whistler Center for Carbohydrate Research and Department of Food Science, Purdue University, West Lafayette, IN, U.S.A.

2:30 p.m.  S-41, CFW 54:A3
Challenges to utilizing physically or chemically structured lipids in baked product systems. K. SEETHARAMAN (1). (1) Department of Food Science, University of Guelph, Guelph, ON, Canada

2:40 p.m.  S-42, CFW 54:A3
Health impact of nanotechnology in food ingredients and processing – Applications and implications. H. CHEN (1). (1) USDA/CSREES Washington, DC, U.S.A

2:50 p.m.  S-43, CFW 54:A3
Novel thermal processing based on microwave and radio frequency energy for packaged foods. J. TANG (1). (1) Washington State University, Pullman, WA, U.S.A.

3:00 p.m.  Panel discussion

### Engineering & Processing

#### Advances in Delivery of Food Nutrients – Tailoring Process Operations for Health and Wellness • 308, CC

Organizers: Martin G. Scanlon, University of Manitoba, Winnipeg, MB, Canada; Hulya Dogan, Kansas State University, Manhattan, KS, U.S.A.; Jorge Morales, Frito-Lay R&D, Plano, TX, U.S.A.; Terri Paeschke, Quaker Oats R&D, Barrington, IL, U.S.A.

Moderators: Martin G. Scanlon, University of Manitoba, Winnipeg, MB, Canada; Hulya Dogan, Kansas State University, Manhattan, KS, U.S.A.

Financial Sponsor: Rich Products

The promotion of health and wellness in food consumption is a powerful driver for ingredient and product development in all of the food industry. The many healthful components found in grains and grain legumes (many in underutilized lower-value process streams) represent a very rich resource that can be fashioned into value-added components to address consumer needs for nutrition, diet, and healthy lifestyle. To achieve this goal in a predictive manner, cereal scientists need two things: 1) good understanding of the basic physical and chemical mechanisms of interactions between food components so that this knowledge can be used to drive process strategies that will maximize nutritional benefits; and 2) process technologies that minimize degradation of the component of interest or provide innovative means of successfully incorporating these higher value components from the grains industry into food products.

2:00 p.m.  S-38, CFW 54:A3
Phytonutrients and challenges of delivery. S. LAMIKANRA (1). (1) Frito-Lay R&D, Plano, TX, U.S.A.

2:10 p.m.  S-39, CFW 54:A3
Impact of processing on functional ingredients. K. L. MCCARTHY (1). (1) University of California, Davis, CA, U.S.A.

### Technical Sessions – Tuesday Afternoon

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### Health & Nutrition

#### Foods for Better Health • 309, CC

Moderator(s): TBD

2:00 p.m.  O-49, CFW 54:A16
Dietary interventions with fibre ingredients – Considerations, measurements, and manipulations. E. J. BECK (1), L. C. Tapsell (1), S. M. Tosh (2), M. J. Batterham (1), X. Huang (1). (1) University of Wollongong, NSW, Australia; (2) Agriculture and Agri-Food Canada, Guelph, ON, Canada

2:20 p.m.  O-50, CFW 54:A29
Low salt – low sugar – great taste: Three ways to enhance taste perception. M. STIEGER (1), H. Bult (1), K. Burseg (1), P. de Kok (1), C. Mosca (2), M. Noort (3), G. Sala (2), F. van de Velde (1), R. Hamer (4). (1) NIZO Food Research, Ede, Netherlands; (2) Wageningen University & Research Centre, Wageningen, Netherlands; (3) TNO Quality for Life, Zeist, Netherlands; (4) TI Food and Nutrition, Wageningen, Netherlands

2:40 p.m.  O-51, CFW 54:A18
Avenanthramides in oats: A new method of producing whole oats and oat ingredients with greatly elevated avenanthramide levels. F. COLLINS (1). (1) Agriculture & Agri-Food Canada, Ottawa, ON, Canada
Cereal-legume pasta: How process, by modifying pasta structure, can change its nutritional properties. V. MICARD (1). (1) Montpellier Supagro, Montpellier, France

Raisin and dried fruit intake is associated with increased whole grain and nutrient intakes and reduced overweight and obesity: NHANES, 1999-2004. J. JONES (1), D. Keast (2). (1) St. Catherine University, St. Paul, MN, U.S.A.; (2) Food and Nutrition Database Consultants

Analysis of Fiber and Nutritional Quality • 310, CC

Moderator: Nali Prchal, Cargill, Inc., Plymouth, MN, U.S.A.


Current fiber regulations affecting existing products and new product launches. S. POTTER (1). (1) Tate & Lyle, Decatur, IL, U.S.A.

A novel approach in the determination of estimated glycaemic response of some breads commonly consumed in Republic of Ireland by RP- HPLC. A. PATRAS (1), E. Gallagher (1). (1) TEAGASC, Dublin, Ireland

Field-flow fractionation as a means to find true molecular weights and sizes of undegraded starch. A. ROLLAND SABATÉ (1), P. Colonna (1). (1) INRA, Nantes, France

Supplier Innovation Sessions – Tuesday Afternoon

Session II • 304, CC

Company: Arla Food Ingredients
Name of Product: Functional Milk Proteins
Contact: Greg Hilbert
Category: Ingredients

Functional Milk Proteins – An All Natural Evolution in Bakery. Applications include egg replacement, gluten-free concepts, cholesterol reduction, and protein fortification.

Company: Balchem Encapsulates
Name of Product: Bakeshure encapsulated ingredients
Contact: Stacy Bally
Category: Ingredients

Functionality and application of microencapsulation technology in extending shelf-life of chemically- and yeast-leavened products.

Company: Calibre Control International Ltd.
Name of Product: C-Cell
Contact: David Cliff
Category: Instruments/Equipment/Services

Applications of the C-Cell Imaging System in milling, baking and ingredients. How data can be used to provide objective scoring and evaluation of ingredients and new products.
Wednesday, September 16

7:00 – 8:00 a.m.  Kansas State University Breakfast*  302-303, CC
7:00 – 8:30 a.m.  North Dakota State University Alumni Breakfast*  305, CC
7:30 – 9:00 a.m.  Scientific Advisory Panel  306, CC
7:00 a.m. – 5:00 p.m.  Room Available for Small Meetings  Tilghman, Hilton
7:30 a.m. – 1:30 p.m.  Registration Open  Main Terrace, Level 300, CC
8:00 – 9:30 a.m.  

Approved Methods Technical Committee Meetings
Barley and Barley Products  Tubman B, Hilton
Bioactive Compounds Methods  Carroll B, Hilton
Bread Baking Methods  Carroll A, Hilton
Chemical Leavening Agents  Stone, Hilton
Dietary Fiber and Other Carbohydrates  Douglass, Hilton
Experimental Milling  Marshall, Hilton
Pulse and Legume  Paca A, Hilton

9:00 – 11:00 a.m.
9:00 a.m. – 12:00 p.m.  Hot Topic Session: Third-Party and Customer Audits: A Current Perspective for Stakeholders Forum  Key Ballroom 9 – 10, Hilton
9:30 – 11:30 a.m.
9:30 – 11:00 a.m.  Supplier Innovation Session III. see page 37  304, CC
10:00 – 11:00 a.m.  Nominating Committee Meeting  Stone, Hilton
11:00 a.m. – 12:00 p.m.  Membership Panel Meeting  Tubman B, Hilton
11:30 a.m. – 1:00 p.m.  ICC Luncheon*  302, CC
11:30 a.m. – 1:00 p.m.  Lunch Break – Cash Concessions Available
11:30 a.m. – 1:00 p.m.  Rheology Division Meeting and Luncheon*  306, CC
12:00 – 3:00 p.m.  Approved Methods Administrative Committee Meeting and Luncheon Meeting  Marshall, Hilton
1:00 – 3:00 p.m.

Scientific Sessions focused on the 7 Scientific Initiatives
Ingredients & Cost of Goods Sold – Opportunities to Enhance Cereal Products: Pulse Components as Nutritional and Functional Ingredients  308, CC
Quality & Analytical Methods – Tools to Evaluate Health Benefits of Cereals  309, CC
Cereal & Polymer Chemistry – Technical Session: Cereal Modification: Structure and Function (includes 2009 Thomas Burr Osborne Medal Lecture)  307, CC
Quality & Analytical Methods – Technical Session: Ensuring Grain and Dough Quality (includes 2009 Applied Research Award Lecture)  310, CC

1:00 – 2:10 p.m.  Supplier Innovation Session IV, see page 39  304, CC
3:30 – 5:00 p.m.  Closing Session with Keynote Speaker, H. S. Muralidhara, Cargill Inc., and Farewell Reception  Key Ballroom 5-8, Hilton

Don’t miss the closing session with keynote speaker H. S. Muralidhara of Cargill, Inc. as he addresses the importance of reusing/recycling water in the food processing industry on Wednesday afternoon. See page 39 for full description of this session.
Ingredients & Cost of Goods Sold

Opportunities to Enhance Cereal Products: Pulse Components as Nutritional and Functional Ingredients • 308, CC
Organizers/Moderators: Heather Maskus, Pulse Canada, Winnipeg, MB, Canada; Ning Wang, Canadian Grain Commission, Winnipeg, MB, Canada
Sponsor: Pulse and Legume Technical Committee
Financial Sponsor: Pulse Canada

Pulses are nutritionally beneficial food sources that are high in fiber, high in protein, and low in fat. They can be used as whole seeds, ground to flours, or fractionated into protein, starch, and fiber streams. New, healthy ingredients are constantly being sought after for use in innovative food products. Pulses may be used as ingredients in many products and provide nutritional, functional, and environmental advantages for our foods. This symposium will focus on the beneficial nutritional impact of including pulses as an ingredient in cereal-based food products and the processing methods to optimize pulse ingredients, and will highlight products potentially capable of incorporating pulses as ingredients.

9:30 a.m.  S-44, CFW 54:A10
Opportunities to improve cereal products using pulses. J. A. WOOD (1), (1) NSW Department of Primary Industries, Tamworth Agricultural Institute, Tamworth, NSW, Australia

9:50 a.m.  S-45, CFW 54:A10
The factors influencing digestibility in vitro of pulse starch. Q. LIU (1), H.-J. Chung (1), (1) Guelph Food Research Centre, Agriculture and Agri-Food Canada, Guelph, ON, Canada

10:10 a.m.  S-46, CFW 54:A10
Precooked pulse flour: Processing, quality, and end product utilization. M. TULBEK (1), S. Simsek (2), C. Hall (3), (1) Northern Crops Institute, ND, U.S.A; (2) North Dakota State University Department of Plant Sciences, ND, U.S.A.; (3) North Dakota State University Department of Cereal Sciences, ND, U.S.A.

10:30 a.m.  S-47, CFW 54:A10
Gluten-free expanded snacks made from lentil fiber-based formulations. J. DE J. BERRIOS (1), J. Pan (1), M. Tom (1), (1) USDA, ARS, WRRC, Albany, CA, U.S.A.

10:50 a.m.  S-48, CFW 54:A11
Use of pulse flours in cereal-based products: Pasta, tortillas, muffins, and extruded snacks. A. S. Bellido (1), L. MALCOLMSON (1), G. Boux (1), P. Frohlich (1), (1) Canadian International Grains Institute, Winnipeg, MB, Canada

11:10 a.m.  S-49, CFW 54:A11
Perspective on pulse uses in India. P. BANUMATHI (1), M. Ilamaran (1), (1) Department of Food Science and Nutrition, Home Science College and Research Institute, Tamil Nadu Agricultural University, Tamil Nadu, India

11:30 a.m.  WITHDRAWN

Quality & Analytical Methods

Tools to Evaluate Health Benefits of Cereals • 309, CC
Organizer: Nancy Ames, Agriculture and Agri-Food Canada, Winnipeg, MB, Canada

Emphasis on the nutritional benefits of cereals suggests a need to consider cereal quality in terms of physiological health effects. To meet this need, development of tools and appropriate predictive tests to help define cereal quality from a human health perspective are required. This symposium will feature advances in nutritional evaluation techniques used to study physiological effects of cereal grain products. Physicochemical characteristics (e.g., viscosity), bioavailability, cell culture studies, animal models, and human clinical studies will be discussed.

9:30 a.m.  S-50, CFW 54:A13
Clinical evaluation of cereal grains. P. JONES (1), (1) Richardson Centre for Functional Foods and Nutraceuticals, Winnipeg, MB, Canada

9:50 a.m.  S-51, CFW 54:A13
Use of cell culture techniques to link cereal grain components to reduction of disease risk in humans. D. PASCOE (1), (1) Cargill Animal Nutrition, Elk River, MN, U.S.A.

10:10 a.m.  S-52, CFW 54:A13
Understanding the nutritional benefits of cereal foods through animal models. W. YOKOYAMA (1), H. Kim (1), (1) USDA, ARS, Albany, CA, U.S.A.

10:30 a.m.  S-53, CFW 54:A13
Assessing availability of grain components using rapid techniques. R. G. FULCHER (1), (1) University of Manitoba, Department of Food Science, Winnipeg, MB, Canada

10:50 a.m.  S-54, CFW 54:A14
In vitro assays for cereal grain-based nutraceutical/functional ingredients. L. YU (1), (1) University of Maryland, College Park, MD, U.S.A.
Wednesday a.m.

11:10 a.m. S-55, CFW 54:A14
Evaluating the structure function relationships of dietary fibre: Cereal beta-glucan, a special case. P. WOOD (1). (1) Agriculture and Agri-Food Canada, Guelph, ON, Canada

11:30 a.m. S-56, CFW 54:A14
A physicochemical method for evaluation of health effects of cereal fibre. T. Sontag-Strohm (1), R. Kivelä (1), L. Nyström (1), H. SALOVARA (1). (1) University of Helsinki, Helsinki, Finland

11:50 a.m. O-87, CFW 54:A16
Resistant starch generated from normal corn starch: The synergistic effect of acid treatment, autoclave, and beta-amylolysis. W. SONG (1), Y. Yao (1). (1) Purdue University, West Lafayette, IN, U.S.A.

Technical Sessions – Wednesday Morning

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Cereal & Polymer Chemistry

Cereal Modification: Structure and Function • 307, CC
Moderator(s): TBD

9:30 a.m. O-61, CFW 54:A19
Basic insights in cereal constituents as a basis for progress in cereal-based biotechnological processes. (Thomas Burr Osborne Medal Award) J. A. DELCOUR (1). (1) Katholieke Universiteit Leuven, Heverlee, Belgium

10:30 a.m. O-62, CFW 54:A20
Using size distribution data to understand the mechanisms of starch biosynthesis, digestion, and degradation. A. Gray-Weale (1), A. Wu (1), R. A. Cave (1), R. G. GILBERT (1). (1) University of Queensland, Brisbane, QLD, Australia

10:50 a.m. O-63, CFW 54:A16
Structural changes from native waxy maize starch granules to water-soluble dextrin. Y. BAI (1), Y. Shi (1). (1) Kansas State University, Manhattan, KS, U.S.A.

11:10 a.m. O-64, CFW 54:A24
Milling behavior of a soft durum wheat line. C. F. MORRIS (1), D. A. Engle (1), A. D. Bettge (1), M. C. Simeone (2), D. Lafiandra (2), K. Shantz (3). (1) USDA-ARS Western Wheat Quality Laboratory, Pullman, WA, U.S.A.; (2) Department of Agrobiology & Agrochemistry, University of Tuscia, Viterbo, Italy; (3) WestBred LLC.

Quality & Analytical Methods

Ensuring Grain and Dough Quality • 310, CC
Moderator(s): TBD

9:30 a.m. O-65, CFW 54:A23
Applying basic research in developing analytical solutions. (2009 Applied Research Award) B. V. MCCLEARY (1). (1) Megazyme Intl. Ireland Ltd., Bray, County Wicklow, Ireland

9:50 a.m. O-66, CFW 54:A19
Hyperspectral image analysis of damaged wheat kernels. S. R. DELWICHE (1), M. S. Kim (2). (1) USDA-ARS, Beltsville, MD, U.S.A.; (2) USDA-ARS, BARC, Beltsville, MD, U.S.A.

10:10 a.m. O-67, CFW 54:A21
Innovating a laser wheat-perforating technology to reduce kernel hardness for milling. G. G. HOU (1), Q. Ling (2), Y. Zhou (3), B. Lee (1). (1) Wheat Marketing Center, Portland, OR, U.S.A.; (2) Oregon State University Food Innovation Center, Portland, OR, U.S.A.; (3) Wheat Marketing Center, Portland, OR, U.S.A./Dept. of Food Science, Anhui Agricultural University, Hefei, China

10:30 a.m. O-68, CFW 54:A21
WITHDRAWN

10:30 a.m. O-69, CFW 54:A26
Effects of sulfhydryl oxidase from Saccharomyces cerevisiae on baking and rheological properties of wheat flour. L. POPPER (1). (1) Muehlenchemie GmbH & Co. KG, Ahrensburg, Germany

10:50 a.m. O-70, CFW 54:A23
Dough rheology and breadmaking traits of flour mill streams from a hard spring wheat and relationships to sulfur content and protein size distribution. Y. LIU (1), G. A. Hareland (2), J. Ohm (2). (1) North Dakota State University, Fargo, ND, U.S.A.; (2) USDA/ARS Wheat Quality Laboratory, North Dakota State University, Fargo, ND, U.S.A.

11:30 a.m. O-71, CFW 54:A27
WITHDRAWN
Supplier Innovation Sessions – Wednesday Morning

Session III • 304, CC

9:30 – 10:00 a.m.
Company: AACC International
Name of Product: AACC International Check Sample Committee
Contact: Ellen Gay
Category: Instruments/Equipment/Services

A review of check samples and how they work.

Tortilla flour processing and evaluation for wheat crop quality survey and durum and pasta quality evaluation (durum experimental milling) and pasta cook tests.

10:10 – 10:40 a.m.
Company: Oat Ingredients, LLC
Name of Product: OatWell Oat Bran
Contact: Scott Dumler
Category: Ingredients

Health, nutrition, and functional attributes of high-fiber bran ingredients for cardiovascular, weight management, glycemic response, and gut health.

10:50 – 11:20 a.m.
Company: Buhler Inc.
Name of Product: Breadcrumbs Produced by Extrusion
Contact: Jenni Harrington
Category: Instruments/Equipment/Services

Extrusion technology allows continued production of a variety of breadcrumbs with the same product quality as traditional.

Sessions – Wednesday Afternoon

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Ingredients & Cost of Goods Sold

The Role of Grain-Based Foods in the Prevention of Childhood Obesity • 309, CC

Organizers: Elizabeth Arndt, ConAgra Foods, Inc., Omaha, NE, U.S.A.; Len Marquart, University of Minnesota, St. Paul, MN, U.S.A.
Sponsor: Grains for Health Foundation
Financial Sponsor: Grains for Health Foundation

Childhood obesity is a multifactorial disease with severe implications for the future health and well-being of school-aged children. Grain foods contribute calories, macronutrients and fiber, various vitamins and minerals along with numerous bioactive components. The grain industry can work together to focus on approaches that gradually introduce grain foods with additional health attributes that help prevent excess weight gain in young children. Consumer, behavioral techniques, and product development approaches will be addressed within the context of the child’s current environment. Each of these disciplines will be instrumental in exploring potential opportunities for developing grain-based foods for assisting in the prevention of excess body weight gain in this population. A panel discussion will examine the current and potential synergy of health care, schools, parents, and communities, along with novel approaches from government, industry, and academic institutions.

1:00 p.m. S-57, CFW 54:A12
The role of grain foods in childhood obesity. L. MARQUART (1). (1) Grains for Health Foundation, University of Minnesota, St. Paul, MN, U.S.A.

1:20 p.m. S-58, CFW 54:A12
Working together – Approaches to maximize consumption, nutrition, and value of whole grain foods. L. MARQUART (1), R. Rosen (1). (1) Grains for Health Foundation, University of Minnesota, St. Paul, MN, U.S.A.

1:30 p.m. S-59, CFW 54:A12
Incorporating behavioral research approaches into the development of whole grain foods to maximize acceptance. E. ARNDT (1), R. Rosen (2). (1) ConAgra Foods, Omaha, NE, U.S.A.; (2) University of Minnesota, St. Paul, MN, U.S.A.

1:40 p.m. S-60, CFW 54:A13
Regulations, labeling, and communication for the national school lunch program. L. LAPEZE (1). (1) USDA-FNS, Baton Rouge, LA, U.S.A.

1:50 p.m. S-61, CFW 54:A13
The role of grain components in school lunch – Bran, germ, and aleurone. J. WELLNITZ (1). (1) Cargill Incorporated, Plymouth, MN, U.S.A.

2:00 p.m. S-62, CFW 54:A13
Whole grains in the marketplace. C. HARRIMAN (1). (1) Whole Grains Council, Boston, MA, U.S.A.

2:10 p.m. Discussion: Linking the supply chain – Creating innovative grain-based foods for kids.

Quality & Analytical Methods

Characterizing the Size and Molecular Weight Distributions of Starch • 310, CC

Organizers: Robert Gilbert, University of Queensland, Brisbane, QLD, Australia; Sandra Hill, University of Nottingham, Loughborough, United Kingdom
Moderator: Robert Gilbert, University of Queensland, Brisbane, QLD, Australia
Financial Sponsors: University of Queensland Centre for Nutrition & Food Sciences; International Union of Pure & Applied Chemistry

Improvements in human and animal nutritional needs, and industrial applications such as paper manufacture, require structure-property relations for starch, especially the distributions of size and of molecular weight of the fully dissolved starch molecules. Examples are emerging as to how these distributions have major effects on cooking and other properties. However, it is likely that there are no reliable data on these distributions for native starch. Characterizing the structure is complex because one of the
two types of starch in grains, amylopectin, is hyperbranched and of very high molecular weight. Size separation techniques (size-exclusion chromatography, field-flow fractionation), with multiple detection, provide in principle powerful tools for obtaining data that are sensitive to this complex structure. However, reliable application of these methods is bedeviled by two problems: 1) not all the starch may be dissolved, and 2) shear scission may occur during separation. This symposium will bring together leading groups to discuss technical details of their different procedures, including the reasons for these being chosen by the particular group and perceived problems with these various methods.

1:00 p.m.  S-63, CFW 54:A6
Starch: Problems, solvents and mysterious molecular masses. S. HILL (1). (1) Nottingham, Loughborough, United Kingdom

1:10 p.m.  S-64.
Modern size-exclusion techniques for characterizing starch. P. KILZ (1). (1) PSS Polymer Standards Service GmbH, Mainz, Germany

1:30 p.m.  S-65, CFW 54:A6
Current dilemmas and paths forward: The needs in food science. M. J. GIDLEY (1). (1) University of Queensland, Brisbane, Australia

1:50 p.m.  S-66, CFW 54:A6
Field-flow fractionation as a means to find true molecular weights and sizes of undergraded starch. P. Colonna (1), A. SABATE (1). (1) INRA, Nantes, France

2:10 p.m.  S-67.

2:30 p.m.  O-88, CFW 54:A18
Limitations in the effectiveness of size exclusion chromatography (SEC, or GPC) on the analysis of starch. R. A. CAVE (1), S. A. Seabrook (1), M. J. Gidley (1), R. Gilbert (1). (1) University of Queensland, Brisbane, QLD, Australia

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Cereal&Polymer Chemistry

First Study to Report – Latest Findings in Cereal Chemistry • 307, CC
Moderator(s): TBD

1:00 p.m.  O-72, CFW 54:A22

1:20 p.m.  O-73, CFW 54:A24
Time domain 2H-NMR relaxation study of starch-2H2O interactions in gelatinized and ungelatinized starches. T. MOTWANI (1), A. Benesi (1), S. Anantheswaran (1). (1) The Pennsylvania State University, University Park, PA, U.S.A.

1:40 p.m.  O-74, CFW 54:A30
Mapping composition of cereal products by NIR hyperspectral imaging. M. B. WHITWORTH (1), S. J. Millar (1), A. Chau (1). (1) Campden BRI, Chipping Campden, Gloucestershire, United Kingdom

2:00 p.m.  O-75, CFW 54:A28
Study on saccharification experiment for extrusion of rice with or without enzyme added as beer adjunct. D. SHEN (1). (1) Shandong University, Zibo, Province Shandong, China

2:20 p.m.  O-76, CFW 54:A30
Starch derivatives and their properties. W. VORWERG (1), S. Radosta (1), B. Volkert (1), K. Hettrich (1). (1) Fraunhofer Institute for Applied Polymer Research, Potsdam, Germany

2:40 p.m.  O-77, CFW 54:A28
Analysis of cereal starches by high performance size exclusion chromatography. S. SIMSEK (1). (1) North Dakota State University, Fargo, ND, U.S.A.

3:00 p.m.  WITHDRAWN

Potential Physiological Effects of Cereal Bioactives • 308, CC

Moderator(s): TBD

1:00 p.m.  O-78, CFW 54:A18
Potential influence of ferulate oligomers on physiological effects of cereal dietary fibers. (Young Scientist Research Award) M. BUNZEL (1). (1) University of Minnesota, Department of Food Science and Nutrition, St. Paul, MN, U.S.A.

1:20 p.m.  O-79, CFW 54:A24
WITHDRAWN

1:20 p.m.  O-80, CFW 54:A22
Starch digestion with human mucosal enzymes. A. LIN (1), B. Hamaker (1), Z. Ao (2), B. Nichols (2), R. Quezada-Calvillo (2), D. Rose (2), L. Sim (2). (1) Purdue University, West Lafayette, IN, U.S.A.; (2) not provided

1:40 p.m.  O-81, CFW 54:A26
Relationships among viscosity of β-glucan found in oat foods, starch digestibility, and human glycaemic response. A. Regand Ramirez (1), S. M. TOSH (1), P. J. Wood (1). (1) Agriculture and Agri-Food Canada, Guelph, ON, Canada

2:00 p.m.  O-82, CFW 54:A20
Arabinoxylan improves indices of gut health and reduces DNA damage in pigs consuming a high risk “Western diet”: A pilot study. M. J. GIDLEY (1), B. A. Williams (1), D. Zhang (1), P. Guinness
Characterization of starch in pig digesta. J. HASJIM (1), R. Cave (1), M. J. Gidley (1), R. G. Gilbert (1). (1) University of Queensland, St. Lucia, Australia

**Supplier Innovation Sessions – Wednesday Afternoon**

**Session IV • 304, CC**

1:00 – 1:30 p.m.
Company: Baker Perkins Inc.
Name of Product: Syrup Make-Up and Coating Systems, Including Sugar-Free
Contact: Ian Purvis
Category: Instruments/Equipment/Services

How cooking systems from the candy industry are improving the output and quality of sugar and sugar-free coatings for RTE cereals.

1:40 – 2:10 p.m.
Company: Bruker Optics
Name of Product: TD-NMR Instrument
Contact: Supriyo Ghosh
Category: Instruments/Equipment/Services

Novel applications of TD-NMR for at-line product and process development and continuous monitoring for cereal manufacturing industry.

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**Thursday, September 17**

8:00 – 11:00 a.m. Board of Directors Meeting

Johnson A, Hilton

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**Closing Session – Wednesday Afternoon**

**Closing Session with Keynote Speaker**
Key Ballroom 5 – 8, Hilton

**Wednesday, September 16**
3:30 – 4:15 p.m.

“Reuse/Recycle Water Opportunities and Challenges in the Food/Bio-Processing Industry Using Membrane Technology: Is this myth or reality?”

H.S. Muralidhara, Cargill, Inc., Minneapolis, MN, U.S.A.

The food-processing industry uses an enormous amount of water. The water is used as a reactive ingredient during processing as a cleaning agent for heating and cooling/chilling and for transportation. The amount of water used has been increasing for a variety of reasons during the last few years. Scarcity of quality water will be a major issue in the upcoming years. Water availability is arguably the most pressing resource in the world. Fresh water is key to sustainable development. An inadequate water supply reduces opportunity for food production/processing and has a detrimental effect on the environment. With the advent of biofuels, the balancing act is absolutely essential. Membrane technology should be explored to mitigate this problem.

The pressure posed by lack of fresh water supplies portends rising water costs, which makes apparent the urgent need to improve water use efficiency. Recycle/reuse of water, if achieved economically, will provide greater operational flexibility and more competitive cost structure in a water-stressed world. There is indeed a dire need to address this issue.

This keynote will address the importance of recycle/reuse opportunities for water in the food- and bio-processing industries to promote sustainable development. The focus will be on actual case histories to demonstrate efficiency improvements of water usage in processing, using membranes that have also had a significant impact on energy efficiency. High-performing membranes with longer lifetime will expand the scope of recycling/reuse opportunities around the globe. The conclusion will cover some of the most important future challenges and opportunities in the field on a global basis.
Scientists use the features of Cereal Chemistry Online to save time while researching.

Eric Newgard signed up for “Table of Contents” alerts for Cereal Chemistry and is alerted bimonthly to browse the newly published findings.

Rashmi Tiwari added amorphous solids, glass transition, nutraceutical, sucrose glasses, and nanoparticles to her saved-searches and is notified when new content is published in Cereal Chemistry Online that includes these terms.

Craig Morris tracks articles that cite those he is interested in, like Compressive Strength of Wheat Endosperm: Analysis of Endosperm Bricks from Cereal Chemistry May/June 2008, so he can follow new developments in the research.

Ramakanth Jonnala added alleles, glutenin, quality, and near-isogenic lines to his saved-searches and is notified when new content is published in Cereal Chemistry Online that relates to these terms.
Poster Schedule and Poster Categories

Taking photographs of displayed materials is prohibited without permission from the authors. See page 42 of this program book for poster titles.

Poster abstracts are available online at http://meeting.aaccnet.org. Click “Program and Events”, then use the drop-down option to choose abstracts. A PDF of poster abstracts is also available at www.aaccnet.org/cerealfoodsworld/openarticles/2009/CFW-54-4-suppl.pdf.

Monday, September 14
7:00 – 10:00 a.m. Poster Set-Up
10:00 a.m. – 3:30 p.m. Poster Viewing
3:30 – 6:30 p.m. Beer and Poster Viewing
Authors Present 3:45 – 5:00 p.m.

Tuesday, September 15
8:00 – 10:30 a.m. Poster Viewing
10:30 a.m. – 2:00 p.m. Coffee at the Exhibits with Poster Viewing
Authors Present 10:45 – 11:45 a.m.
2:00 – 6:00 p.m. Poster Take-Down

Poster Categories

Health & Nutrition
Glycemic Index (Poster 89)
Bioactives (Posters 90 – 102)
Fiber (Posters 103 – 110)
Bakery (Posters 111 – 112)
Protein (Poster 113)
Networking (Posters 114 – 115)

Food Safety & Regulatory
(Posters 116 – 123)

Biotechnology & Sustainability
(Posts 124 – 128)

Cereal & Polymer Chemistry
Bioactives (Posters 129 – 131)
Starch (Posters 132 – 155)
Bread (Posters 156 – 162)
Protein (Posters 163 – 166)
Fiber (Posters 167 – 171)
Cookies (Posters 172 – 173)
Lipids (Posters 174 – 176)

Quality & Analytical Methods
Fiber (Posters 177 – 183)
Dough (Posters 184 – 185)
Starch (Posters 186 – 188)
Enzymes (Posters 189 – 191)
Food Products (Posters 192 – 198)
Wheat (Posters 199 – 208)
Milling (Posters 209 – 214)
Protein (Posters 215 – 216)
Bioactives (Posters 217 – 222)
Bioprocessing (Poster 223)
NIR (Posters 224 – 226)
Imaging and Microscopy (Posters 227 – 229)
Salt (Posters 230 – 231)
Rice (Poster 232)

Ingredients & Cost of Goods Sold
Novel Ingredients (Posters 233-239)
Glycemic Index (Poster 240)
Bakery Products (Posters 241-247)
Fiber (Posters 248-252)
Wheat (Posters 253-254)
Sorghum (Posters 255-256)
Salt (Posters 257-258)
Hydrocolloids (Posters 259-260)
Lipids (Poster 261)

Engineering & Processing
Rice (Poster 262)
Protein (Posters 263-266)
Extrusion (Posters 267-274)
Bioactives (Posters 275-276)
Bread (Posters 277-284)
Starch (Posters 285-298)
Milling (Posters 299-301)
Bioprocessing (Posters 302-305)
Nixtamal and Maize Tortilla (Posters 306-309)
Irradiation (Poster 310)
Glycemic Index

P-89. CFW 54:A54

Bioactives

P-90. CFW 54:A48
Influence on cholesterol by diets containing garbanzo, Bengal gram, lentils, soy isolate, salmon hydrolysate, and casein in hamsters. T. S. KAHLON (1), R. J. Avena-Bustillos (2), M. M. Chiu (3). (1) USDA ARS WRRC, Albany, CA, U.S.A.; (2) University of California, Davis, CA, U.S.A.; (3) WRRC, USDA-ARS, Albany, CA, U.S.A.

P-91. CFW 54:A66
Protective role of L-carnitine in albino rats treated with different concentrations of acrylamide. E. S. SHAKER (1). (1) Minia University, Minia, Egypt

P-92. CFW 54:A58
The effect of using Doum fruit on lipid profile in experimental rats and its effect on quality characteristics of some bakery products. N. A. OWISS (1). (1) Helwan University, Cairo, Egypt

P-93. CFW 54:A53
Cardio healthy French bread: Characterization and health benefits. X. LOPEZ (1), C. Bugueno (1), R. Jeria (1), D. Piderit (1). (1) Granotec Grupo America, Santiago, Chile

P-94. CFW 54:A38
Sugar sensing by Caco-2/TC7 cells. M. M. CHENG (1), B. R. Hamaker (1), G. Zhang (2). (1) Department of Food Science, Whistler Center for Carbohydrate Research, Purdue University, West Lafayette, IN, U.S.A.; (2) School of Food Science and Technology, Jiangnan University, Wuxi, Jiangsu Province, China

Fiber

P-95. CFW 54:A57
The effect of Teff consumption on satiety and adult body composition. S. K. Ng (1), E. Derbyshire (1), V. STOJCESEK (1). (1) The Manchester Metropolitan University, Manchester, United Kingdom

P-96. CFW 54:A52
Effect of processing on pasting properties and in vitro bile acid binding of oat flours. Y. LIU (1), T. B. Bailey (2), P. J. White (1). (1) Department of Food Science and Human Nutrition, Iowa State University, Ames, IA, U.S.A.; (2) Department of Statistics & Statistical Laboratory, Iowa State University, Ames, IA, U.S.A.

P-97. CFW 54:A65
Effects of dietary oil on reducing starch digestive rate of cooked starchy foods. S. SETIAWAN (1). (1) Iowa State University, Ames, IA, U.S.A.

P-98. CFW 54:A46
A comparative evaluation of antioxidant properties of commercial brands of regular- and whole-wheat spaghetti. R. Hirawan (1), W. Ser (1), S. Arntfield (1), T. BETA (1). (1) University of Manitoba, Winnipeg, MB, Canada

P-99. CFW 54:A58
Carotenoids of biological importance in Brazilian corn cultivars. M. D. PAES (1), P. O. Guimaraes (1), R. E. Schaffert (1). (1) EMBRAPA Maize and Sorghum, Sete Lagoas, MG, Brazil

P-100. CFW 54:A62
Nutritional and sensory evaluation of corn tortilla using chia seed (Salvia hispanica L.). R. RENDON-VILLALOBOS (1), G. Pacheco-Vargas (1), J. Islas-Hernández (1), N. Astilleros-Rosas (2). (1) CEPROBIP, Yautepec, Morelos, Mexico; (2) Instituto Tecnologico de Zacatepec, Mexico

P-101. CFW 54:A53
Comparative evaluation of phytochemical profiles and identification of flavonoids in cereal grains. Q. Liu (1), Y. Qiu (2), A. Borgen (3), T. BETA (4). (1) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada; (2) School of Food Science and Engineering, Nanjing University of Finance and Economics, Nanjing, Jiangsu, P. R. China, (3) Agrologica, Mariager, Denmark; (4) University of Manitoba, Winnipeg, MB, Canada

P-102. CFW 54:A42
Effect of flaxseed addition on proximal composition and digestibility of corn tortilla. F. GARCIA-SUAREZ (1), G. Pacheco-Vargas (1), F. Gutierrez-Meraz (1). (1) CEPROBIP, Yautepec, Mexico

P-103. CFW 54:A72
Hamster feeding study with phosphorylated cross-linked resistant (CL RS4) wheat starch. K. WOO (1), P. A. Seib (2). (1) MGP Ingredients Inc., Atchison, KS, U.S.A.; (2) Kansas State University, KS, U.S.A.

P-104. CFW 54:A49
In vitro fermentation of high, medium, and low molecular weight -glucan with human fecal flora. H. KIM (1), P. J. White (1). (1) Iowa State University, Ames, IA, U.S.A.

P-105. CFW 54:A63
Alkali-extractable arabinoxyylan xylanase-hydrolyzates from corn, wheat, and rice brans and their in vitro fermentation by human fecal microbiota. P. P. RUMPAGAPORN (1), B. R. Hamaker (1). (1) Food Science Department, Purdue University, West Lafayette, IN, U.S.A.

P-106. CFW 54:A48
In vitro starch digestibility and glycemic property of Acha (Digitaria exilis) porridge. V. A. JIDEANI (1), S. C. Podgorski (1). (1) Department of Food Technology,
Cape Peninsula University of Technology, Cape Town, South Africa

P-107. CFW 54:A63  
Growth of selected *Bifidobacterium* strains on resistant starches with different residual susceptibilities to digestion. D. SAIIBENE (1), R. F. Roberts (1), D. B. Thompson (1). (1) Penn State University, State College, PA, U.S.A.

P-108. CFW 54:A72  
Resistant starch: The evolution of starch molecule size during in vitro digestion. T. T. Witt (1), M. J. Gidley (2), R. GILBERT (1). (1) Centre for Nutrition and Food Science, Brisbane, Australia; (2) University of Queensland, Brisbane, QLD, Australia

Posters 116 – 123

Food Safety & Regulatory

P-116. CFW 54:A60  
Single kernel analysis of Fusarium head blight symptoms and mycotoxins in infected wheat heads. K. H. PEIRIS (1), M. O. Pumphrey (2), Y. Dong (3), F. E. Dowell (4). (1) Agricultural and Biological Engineering, Kansas State University, Manhattan, KS, U.S.A.; (2) USDA, ARS, GMPRC Plant Science and Entomology Research Unit, Manhattan, KS, U.S.A.; (3) Department of Plant Pathology, University of Minnesota, St. Paul, MN, U.S.A.; (4) USDA, ARS, GMPRC Engineering & Wind Erosion Research Unit, Manhattan, KS, U.S.A.

P-117. CFW 54:A51  
The ways of increasing safety of baked goods’ components and also of functionally technological characteristics of the complete product. A. LAZUTKIN (1), A. I. Moisoeva (1), N. M. Shlenskaya (1), A. Lazutkin (1). (1) Moscow State University of Technology and Management, Moscow, Russia

P-118. CFW 54:A66  
Whole and sprouted wheat dough properties and pasta quality. D. SHNEIDER (1), A. Moisoeva (1), I. Moiseev (2), D. Shneider (1). (1) Moscow State University of Technology and Management, Moscow, Russia; (2) New World Pasta Co., Harrisburg, PA, U.S.A.

P-119. CFW 54:A50  
Food composition database: For safety assessment of genetically modified crops as foods and feeds. K. KITTA (1), M. Ebihara (1), T. Kurashima (1), T. liduka (2), Y. Hirata (3), A. Hino (1), K. Ishikii (4), S. Kawamoto (1). (1) National Food Research Institute, Tsukuba, Japan; (2) Japan Inspection Association of Food and Food Industry Environment, Tokyo, Japan; (3) Japan Food Research Laboratories, Tokyo, Japan; (4) Faculty of Fisheries Sciences, Hokkaido University, Hakodate, Japan

P-120. CFW 54:A37  

P-121. CFW 54:A40  
Real-time PCR assay for quantification of *Fusarium graminearum* in cereals and correlation with deoxynivalenol and fusarium damaged kernel values. T. DEMEKE (1), R. Clear (1), T. Graefenhan (2), A. Phan (1), I. Ratmayaka (1), S. Patrick (1), D. Gaba (1). (1) Canadian Grain Commission, Winnipeg, MB, Canada; (2) Agriculture and Agri-Food Canada, Ottawa, ON, Canada

P-122. CFW 54:A36  
Prevalence and detection of mycotoxins in dried distillers grains from Nebraska A. BIANCHINI (1), J. Stratton (1), L. B. Bullerman (1), S. Chung (1), T. Jackson (1). (1) Agricultural and Food Research Organization, Tsukuba, Japan; (2) National Institute of Health Sciences, Tokyo, Japan

Quality and Safety

P-109. CFW 54:A59  

P-110. CFW 54:A69  
Lower fecal short-chain fatty-acid concentrations in rats consuming polyphenol-rich sorghum bran diets results in fewer aberrant colonic crypts. N. D. TURNER (1), S. T. Addo (1), R. J. Carroll (1), C. M. McDonough (1), L. W. Rooney (1), J. B. Lewis (2). (1) Texas A&M University, College Station, TX, U.S.A.; (2) not provided

Bakery

P-111. CFW 54:A58  

P-112. CFW 54:A67  
Psychosocial factors that influence whole grain bread consumption. S. A. SJOBERG (1), L. F. Marquart (1), M. Reicks (1). (1) University of Minnesota, St. Paul, MN, U.S.A.

Protein

P-113. CFW 54:A59  
Significance of the proportion and composition of albumins on in vitro protein digestibility of raw and cooked pea seeds. S. PARK (1), B. Baik (1). (1) University of Minnesota, St. Paul, MN, U.S.A.

Networking

P-114. CFW 54:A45  

P-115. CFW 54:A45  
Biotechnology & Sustainability

Posters 124 – 128

P-124. CFW 54:A44
Technological properties of extruded flour and tortillas from transgenic maize (*Zea mays* L.) expressing amarantin. R. GUTIERREZ-DORADO (1), J. Milan-Carrillo (2), S. Mora-Rochin (1), J. Lopez-Valenzuela (1), A. Valdez-Ortiz (1), C. Reyes-Moreno (1). (1) not provided (2) Univ. Autonoma de Sinaloa, Culiacan, Sinaloa, Mexico

P-125. CFW 54:A57
Effect of cyclodextrin glycosyltransferase (CGTase) on wheat bread staling. D. S. OLIVEIRA (1), T. S. Rocha (2), J. T. Romero (2), R. da Silva (2), C. M. Franco (2). (1) Universidade Estadual Paulista, São José do Rio Preto, Brazil; (2) UNESP-University of Sao Paulo State, Sao Jose do Rio Preto, SP, Brazil

P-126. CFW 54:A56

P-127. CFW 54:A50

P-128. CFW 54:A52
Grain Foods CRC Ltd – Australian Cooperative Grain Food Science. D. R. LIND (1). (1) Grain Foods CRC Ltd., North Ryde, NSW, Australia

Cereal & Polymer Chemistry

Posters 129 – 176

Bioactives

P-129. CFW 54:A34
Total phenolics, flavonoids, antioxidant capacity in rice grain and their relations to grain color, size, and weight. J. BAO (1), Y. Shen (1), L. Jin (1). (1) Zhejiang University, Hangzhou, Peoples Republic of China

P-130. CFW 54:A57
Effect of bisulfite on color properties of 3-deoxyanthocyanins at different pH levels. L. O. OJWANG (1), J. M. Awika (1). (1) Texas A&M University, Cereal Quality Laboratory, College Station, TX, U.S.A.

P-131. CFW 54:A68
Effect of environment on flavonoid levels in sorghum grains. V. M. TALEON (1), L. Dykes (1), L. W. Rooney (1), W. L. Rooney (1). (1) Texas A&M University, College Station, TX, U.S.A.

Starch

P-132. CFW 54:A51
Effects of heat treatments on the milling and physicochemical properties of rough rice during storage. Y. LEE (1), Y. Wang (1). (1) University of Arkansas, Fayetteville, AR, U.S.A.

P-133. CFW 54:A35
Structural studies of maize and barley starches: Amylose and amylpectin. L. A. BELLO-PEREZ (1), S. Rodriguez-Ambriz (1). (1) CEPROBI-IPN, Yautepec, Morelos, Mexico

P-134. CFW 54:A35
Effect of the acetylation degree in the morphological, physicochemical and structural characteristics of barley starch. L. BELLO-PEREZ (1), P. B. Zamudio-Flores (1), G. Mendez-Montealvo (1), S. L. Rodriguez-Ambriz (1). (1) CEPROBI-IPN, Yautepec, Morelos, Mexico

P-135. CFW 54:A72
The functional significance of starch-branching enzyme Ia in the synthesis, hydrolysis, and utilization of maize endosperm starch. H. XIA (1), M. J. Guiltnan (1), D. B. Thompson (1). (1) The Pennsylvania State University, University Park, PA, U.S.A.

P-136. CFW 54:A40
Susceptibility of different forms of wheat starch to enzymic attack. L. COPELAND (1). (1) University of Sydney, NSW, Australia

P-137. CFW 54:A39

P-138. CFW 54:A50
Preparation of polypseudorotaxane gels through supramolecular self-assembling between beta-cyclodextrin and polyalkylene glycols. W. KUO (1), H. Lai (1). (1) National Taiwan University, Taipei, Taiwan

P-139. CFW 54:A33
Characteristics of starch fine structure and pasting properties of waxy rice during storage. Y. HUANG (1), H. Lai (1). (1) National Taiwan University, Taipei, Taiwan

P-140. CFW 54:A33
Cooling procedure after sterilization in a liquid of a specific starch determines the in vitro digestion and particle size characteristics. E. ABRAHAMSE (1), F. Dijk (1), J. Knol (1), H. Bouritius (1). (1) Danone Research - Centre for Specialised Nutrition, Wageningen, Netherlands

P-141. CFW 54:A55
Rheological properties of waxy corn mutants as modified by isoamylase. M. MENDEZ-MONTEALVO (1), Y. Wang (1), M. Campbell (2). (1) University of Arkansas, Fayetteville, AR, U.S.A.; (2) Truman State University, Kirksville, MO, U.S.A.

P-142. CFW 54:A46
Effect of genotype and environment on starch and protein content in, and the physicochemical properties of starch from, field pea and fababean. S. HOOD-NIEFER (1), R. Tyler (2). (1) Parrheim Foods, Saskatoon, SK, Canada; (2) University of Saskatchewan, Saskatoon, SK, Canada

P-143. CFW 54:A47
Dosage effect of high-amyllose modifier (HAM) gene on
physicochemical properties of maize amylose-extender (ae) starch. H. JIANG (1), M. Campbell (2), J. Jane (1). (1) Iowa State University, Ames, IA, U.S.A.; (2) Truman State University, Kirksville, MO, U.S.A.

P-144.  CFW 54:A66
Iodine binding of amylopectin to explore the flexibility of internal chains. X. SHEN (1), E. Bertof (2), G. Zhang (3), B. Hamaker (1). (1) Purdue University, West Lafayette, IN, U.S.A.; (2) Åbo Akademi, Turku, Finland; (3) Jiangnan University, Wuxi, Jiangsu, China

P-145.  CFW 54:A65
Starch digestion of various noodle products in Korea. T. SEO (1), J. Han (2), S. Lim (1). (1) School of Life Sciences and Biotechnology, Korea University, Seoul, South Korea; (2) Department of Foodservice Management and Nutrition, Sangmyung University, Seoul, South Korea

P-146.  CFW 54:A51
Effects of salts on molecular conformation of waxy maize amylopectin in aqueous–DMSO solutions measured by light scattering detectors. J. LEE (1), S. Lim (1). (1) Korea University, Seoul, Korea

P-147.  CFW 54:A64
Characteristics of biofilms from pea starch (Pisum sativum) in association with xanthan gum and glycerol. S. B. SARMENTO (1), M. D. Matta (1), C. I. Sarantopoulos (2), L. M. Oliveira (2), S. S. Zocchi (1). (1) Universidade de São Paulo/ESALQ, Piracicaba, São Paulo, Brazil; (2) Instituto de Tecnologia de Alimentos/CETEA, Campinas, São Paulo, Brazil

P-148.  CFW 54:A62
Characterization of Peruvian carrot starch and effect of annealing on its semi-crystalline structure. T. S. ROCHA (1), J. Jane (2), C. M. Franco (1). (1) UNESP – University of São Paulo State, Sáo José do Rio Preto, SP, Brazil; (2) Iowa State University, Ames, IA, U.S.A.

P-149.  CFW 54:A37
Structure and digestibility of debranched waxy wheat, waxy corn, and waxy potato starches. L. CAI (1), Y. Shi (1). (1) Kansas State University, Manhattan, KS, U.S.A.

P-150.  CFW 54:A37
The effect of cooling, freezing, and freeze-thawing on slowly digestible starch formation in mashed potatoes. T. BUI (1), Q. Liu (2), R. Yada (1). (1) University of Guelph, Guelph, ON, Canada; (2) Agriculture and Agri-Food Canada, Guelph, ON, Canada

P-151.  CFW 54:A50
Impact of A- and B-type granule ratio on swelling, gelatinization, and pasting properties of hydroxypropylated wheat starch. H. KIM (1), K. C. Huber (1). (1) University of Idaho, Moscow, ID, U.S.A.

P-152.  CFW 54:A71
Use of iodine vapour as a tool to understand the wheat starch granule structure during maturity. R. N. WADUGE (1), K. Seetharaman (1). (1) University of Guelph, Guelph, ON, Canada

P-153.  CFW 54:A33
Characterization of sorghum starch. Y. AI (1), R. Wongsagonsup (1), D. Wang (2), J. Jane (1). (1) Iowa State University, Ames, IA, U.S.A.; (2) Kansas State University, Manhattan, KS, U.S.A.

P-154.  CFW 54:A69
Relating wheat starch A- and B-type granule reactivity to molecular reaction patterns on derivatized starch chains.

P-155.  CFW 54:A41

Bread

P-156.  CFW 54:A65
Effect of Capsicum powder on breadmaking properties. M. SEGUCHI (1), (1) Kobe Women’s University, Suma-Ku Kobe, Japan

P-157.  CFW 54:A47
Hydrothermal characteristics of pearl millet (Pennisetum glaucum) flour during cooking into ‘Fura’. V. A. JIDIANI (1), D. J. Scott (1). (1) Department of Food Technology, Cape Peninsula University of Technology, Cape Town, South Africa

P-158.  CFW 54:A42
Water absorption and mixing behavior of hard and soft wheat flours with bran inclusions. H. GAJULA (1), J. Faubion (1), H. Dogan (1). (1) Kansas State University, Manhattan, KS, U.S.A.

P-159.  CFW 54:A64
The effect of bubbles on dough relaxation. M. G. SCANLON (1), Y. Fan (1), J. H. Page (1). (1) University of Manitoba, Winnipeg, MB, Canada

P-160.  CFW 54:A39

P-161.  CFW 54:A65
Effect of isolated rye pentosans on some properties of gluten-free breads. J. Schmidt (1), K. Hanz (1), E. Brenner (1), S. Theiß (1), E. BERGHOFER (1). (1) University of Natural Resources and Applied Life Sciences, Division Food Technology, Vienna, Austria

P-162.  CFW 54:A36
Gelatin as functional ingredient in gluten-free bread. S. E. BOSWELL (1), C. M. McDonough (1), L. W. Rooney (1). (1) Cereal Quality Laboratory, Texas A&M University, College Station, TX, U.S.A.

Protein

P-163.  CFW 54:A68
Heat-induced gelation of pea protein extracted by salt method: Effect of pH and NaCl. X. D. SUN (1), S. D. Arntfield (1). (1) University of Manitoba, Winnipeg, MB, Canada

P-164.  CFW 54:A64
Adiabatic compressibility measurements on gliadin solutions. M. SCANLON (1), Z. Zhang (1). (1) University of Manitoba, Winnipeg, MB, Canada

P-165.  CFW 54:A46
Phytoglycogen, a dendritic polysaccharide nanoparticle, has unique hydrolysis pattern with amyloglucosidase. L. HUANG (1), Y. Yao (1). (1) Purdue University, West Lafayette, IN, U.S.A.

P-166.  CFW 54:A44
Effects of drying conditions on endogenous enzyme

Fiber

P-167. CFW 54:A66
Diffusion and rheology characteristics of arabinoxylan solutions and implications for digestion. K. J. SHELAT (1), A. Aupot (1), T. M. Nicholson (2), K. Wong (1), R. G. Gilbert (3), M. J. Gidley (1). (1) Center for Nutrition and Food Science, University of Queensland, St. Lucia, QLD, Australia; (2) Centre for High Performance Polymers, University of Queensland, St. Lucia, QLD, Australia; (3) Centre for Nutrition and Food Science, University of Queensland, Brisbane, QLD, Australia

P-168. CFW 54:A48
Differences in rheological properties of various corn bran arabinoxylans. M. KALE (1), D. Pai (1), H. Chang (1), B. Hamaker (1), O. Campanella (1). (1) Purdue University, West Lafayette, IN, U.S.A.

P-169. CFW 54:A73

P-170. CFW 54:A38
Interaction of iodine with different homo-glucan structures. F. CHAUHAN (1), K. Seetharaman (1). (1) University of Guelph, Guelph, ON, Canada

P-171. CFW 54:A42
The interactions of bran with gluten proteins during dough development using x-ray microtomography. H. GAJULA (1), J. Faubion (1), H. Dogan (1). (1) Kansas State University, Manhattan, KS, U.S.A.

Cookies

P-172. CFW 54:A59
Mobility as a key in sugar-snap cookie dough setting. B. PAREYT (1), J. A. Delcour (1). (1) Laboratory of Food Chemistry and Biochemistry and Leuven Food Science and Nutrition Research Centre (LFoRCe), Katholieke Universiteit Leuven, Belgium

P-173. CFW 54:A62
Physico-chemical and sensory evaluation of cookies enriched with fiber from wheat by-products. A. ROMERO-BARANZINI (1), M. Salazar (1), F. Reyes-Pérez (1), P. Rayas-Duarte (2), R. Alfaro-Rodriguez (3). (1) Universidad de Sonora, Hermosillo Sonora, Mexico; (2) Robert M. Kerr Food & Agricultural Products Center, Oklahoma State University, OK, U.S.A.; (3) Universidad Autonoma del Estado de Hidalgo, Tulancingo, Hidalgo, Mexico

Lipids

P-174. CFW 54:A41
Quantitative characterization of polar lipids from wheat whole-meal, flour, and starch. S. M. FINNIE (1), R. Jeannotte (1), J. Faubion (1). (1) Kansas State University, Manhattan, KS, U.S.A.

P-175. CFW 54:A72

P-176. CFW 54:A44
Effect of storage of flour-blasted brown rice on lipolysis, peroxide value, texture, water absorption, and pasting properties of their flours. H. GURAYA (1), J. Patindol (1), E. Champagne (1). (1) USDA-ARS-SRRC, New Orleans, LA, U.S.A.

Quality & Analytical Methods

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Fiber

P-177. CFW 54:A71
Genotypic and environmental effect on resistant starch, oligosaccharide, and trypsin inhibitor activity levels in field peas (Pisum sativum). N. WANG (1), D. Hatcher (1), R. Toews (1), T. Warkentin (2). (1) Canadian Grain Commission, Winnipeg, MB, Canada; (2) Crop Development Centre, University of Saskatchewan, SK, Canada

P-178. CFW 54:A56
Resin embedding of whole groats for rapid evaluation of -glucan distribution in oats. S. MILLER (1), B. G. Rossnagel (2). (1) Agriculture & Agri-Food Canada, Ottawa, ON, Canada; (2) University of Saskatchewan, College of Agriculture & Bioresources, Crop Development Centre, Saskatoon, SK, Canada

P-179. CFW 54:A51
Production of slowly digestible starch with dual enzyme treatments. B. LEE (1), B. R. Hamaker (1), S. Yoo (2). (1) Department of Food Science, Whistler Center for Carbohydrate Research, Purdue University, West Lafayette, IN, U.S.A.; (2) Department of Food Science & Technology and Carbohydrate Bioproduct Research Center, Sejong University, Seoul, Korea

P-180. CFW 54:A71

P-181. CFW 54:A60
Correlations between head rice thermal properties and cooked rice nutritionally important starch fractions. J. PATINDOL (1), H. Guraya (1), K. Daigle (1). E. Champagne (1). (1) USDA ARS SRRC, New Orleans, LA, U.S.A.

P-182. CFW 54:A73
Storage of yogurts with added beta-glucan from oats. N. YAO (1). (1) Iowa State University, Ames, IA, U.S.A.
Effect of partial replacement of wheat flour for fiber and protein of soy and technological changes in the properties of dough. C. R. Gomes-Ruffi (1), F. P. Collares-Queiroz (2), S. H. Biondi (1), F. M. Montenegro (1), M. X. Paz (1), A. C. Dalmora (1). (1) ITAL Inst de Tecnologia de Alimentos, Campinas, SP, Brazil; (2) State University of Campinas, Campinas, Sao Paulo, Brazil

A modified alveograph method for dough evaluation of wheat breeding lines. R. Y. Chen (1), B. W. Seabourn (1), T. J. Herald (2). (1) USDA, ARS, GMPRC, Hard Winter Wheat Quality Lab, Manhattan, KS, U.S.A.; (2) USDA, ARS, GMPRC, Grain Quality and Structure Research Unit, Manhattan, KS, U.S.A.

Effect of oxidizing agents on the rheological properties of refined and whole-grain wheat flour doughs. H. C. I. Ambiel (1), E. P. R. Pereira (1), E. O. C. Amorim (1), Y. K. Chang (1), C. J. Steel (1). (1) University of Campinas (UNICAMP), Campinas, SP, Brazil

Measurement of total starch. B. V. Mccleary (1), A. Draga (1), I. Lazewska (1). (1) Megazyme International Ireland Limited, Bray, County Wicklow, Ireland

HCl assay for residual starch determination in corn germ and fiber. B. C. Vidal (1), K. D. Rausch (2), M. E. Tumbleson (2), V. Singh (2). (1) University of Illinois, Urbana, IL, U.S.A.; (2) University of Illinois at Urbana-Champaign, IL, U.S.A.

Application of rapid visco-analysis to monitor starch retrogradation. W. S. Ratnayake (1), D. Rybak (1), D. S. Jackson (1). (1) University of Nebraska, Lincoln, NE, U.S.A.


Effect of xylanase addition on quality characteristics of pan bread prepared from refined or whole-grain wheat flour. C. B. da Silva (1), L. Z. Jaekel (1), C. J. Steel (1), Y. K. Chang (1). (1) University of Campinas (UNICAMP), Campinas, SP, Brazil

A simple method for the determination of xylanase activity on insoluble substrates. D. Rose (1), G. Inglett (1). (1) USDA, Peoria, IL, U.S.A.

Food Products

Sensory and rheological properties of noodles enrichment with jatropha curcas flours. N. Guemes Vera (1), G. Flores-Miranda (1), E. Gomez-Montes (1), S. Sotimental (1), E. Perez Soto (1), J. Martinez-Herrera (2), J. Chavez-Hernandez (3), R. Gomez-Ramirez (1). (1) Instituto de Ciencias Agropecuarias Universidad Autonoma del Estado de Hidalgo, Tulancingo, Hidalgo, Mexico; (2) Centro de Productos Bioticos del IPN Yautpec, Morelos, Mexico; (3) Ciencias Veterinarias y Agronómicas del Instituto Tecnologico de Sonora, Cd. Obregon, Sonora, Mexico

Baking characteristics of Tollocan, Saturno, and Salamanca wheat flour using extensibility, adhesives, and texture profile analysis. N. Guemes Vera (1), E. I. Mera Garcia (2), M. M. Lopez-Rodriguez (2), S. Flores-Mera (2), A. Santos-Escamilla (2), S. Sotimental (1), J. F. Hernandez-Chavez (3). (1) Instituto de Ciencias Agropecuarias de la Universidad Autonoma del Estado de Hidalgo Tulancingo, Hidalgo, Mexico; (2) Instituto Tecnologico Superior del Occidente del Estado de Hidalgo, Mexico; (3) Ciencias Veterinarias y Agronómicas del Instituto Tecnologico de Sonora Cd. Obregon, Sonora, Mexico
P-200. CFW 54:A72
WITHDRAWN

P-201. CFW 54:A54
Carotenoid pigment content in durum wheat kernels. F. A. MANTHEY (1), E. M. Elias (1), (1) North Dakota State University, Fargo, ND, U.S.A.

P-202. CFW 54:A41
Study of compressive strength properties (Poisson’s ratio) of different wheat classes. J. FIGUEROA CARDENAS (1), Z. J. Hernández (1), P. Rayas-Duarte (2), K. Khan (3). (1) CINVESTAV Unidad Queretaro, Queretaro, Qro., Mexico; (2) Robert M. Kerr Food & Agricultural Products Center, Oklahoma State University, Stillwater, OK, U.S.A.; (3) Department of Cereal and Food Sciences, North Dakota State University, Fargo, ND, U.S.A.

P-203. CFW 54:A56
Evaluation of rheological and technological behavior of triticale flour, obtained from Embrapa’s cultivars and their mixtures with wheat flour. F. M. MONTENEGRO (1), L. P. Dias (2), C. R. Gomes-Ruffi (1), A. Nascimento Junior (3), E. H. Nabeshima (1). (1) ITAL - Institute of Food Technology, Campinas, SP, Brazil; (2) Faculty of Food Engineering – UNICAMP, Campinas, São Paulo, Brazil; (3) National Wheat Research Center - EMBRAPA, Passo Fundo, RS, Brazil

P-204. CFW 54:A57
Effects of ascorbic acid on the formation of specks in wheat flour products. H. OKUSU (1). (1) Nippon Flour Mills Co Ltd., Kanagawa, Japan

P-205. CFW 54:A37
Combined protein and starch rheological measurements for evaluation of bread-making potential in hard red spring wheat breeding lines. M. CAFFE (1), K. Glover (1), P. Krishnan (1). (1) South Dakota State University, Brookings, SD, U.S.A.

P-206. CFW 54:A60
Rapid and low-cost system for detecting insect-infested grain and estimating storability. T. PEARSON (1), P. Flinn (1), D. Brabc (1). (1) USDA-ARS-GMPRC, Manhattan, KS, U.S.A.

P-207. CFW 54:A45

P-208. WITHDRAWN

Milling

P-209. CFW 54:A40
Description of a laboratory milling process to obtain quinoa flour and pericarp. A. DUBAT (1), S. Geoffroy (1), O. Lebrun (1). (1) CHOPIN Technologies, Villeneuve la garenne, France

P-210. CFW 54:A69
Evaluation of chemical, physical, and wet-milling properties of commercial corn hybrids. M. URIARTE (1), C. Reyes-Moreno (2), R. Gutierrez-Dorado (3). (1) Facultad de Ciencias Quimico Biologicas, Universidad Autonoma de Sinaloa; (2) Cinvestav-IFN, Irapuato Gto, Mexico; (3) Universidad Autonoma de Sinaloa, Culiacan, Sinaloa, Mexico

P-211. CFW 54:A60
New, cost efficient NIR diode array based analyzer for online applications from FOSS. J. PERSSON (1). (1) Foss Analytical AB, Hoganas, Sweden

P-212. CFW 54:A49
Semolina granulation and pasta quality. N. KAZENNOVA (1), I. Moiseev (2). (1) Moscow State University of Technology and Management, Moscow, Russia; (2) Harrisburg, PA, U.S.A.

P-213. CFW 54:A55
New approaches for semolina characterization. A. MARTI (1), G. Bottega (1), R. Caramanico (2), M. Pagani (1), K. Seetharaman (3). (1) University of Milan, Milan, Italy; (2) CRA-SCV, S. Angelo Lodigiano (LO) – Italy; (3) University of Guelph, Guelph, ON, Canada

P-214. CFW 54:A33
Separation and isolation of intact parenchyma cells from raw (uncooked) potato (Solanum tuberosum) tissue. A. ANANTACHOTE (1), H. Kim (1), K. C. Huber (1). (1) University of Idaho, Moscow, ID, U.S.A.

Protein

P-215. CFW 54:A45
Measurement of amino acid content of whole-kernel corn with near-infrared spectroscopy. C. L. HARDY (1), C. R. Hurburgh (1), G. R. Rippke (1), W. Goldstein (2). (1) Iowa State University, Ames, IA, U.S.A.; (2) Michael Fields Ag. Institute, East Troy, WI, U.S.A.

P-216. CFW 54:A57

Bioactives

P-217. CFW 54:A52

P-218. CFW 54:A68
Influence of genotype and environment on the antioxidative activity of field pea (Pisum sativum) grown in Canada: A comparison of two analytical methods. M. D. STOUTGHTON-ENS (1), D. Hatcher (1), N. Wang (1), T. D. Warkentin (2). (1) Canadian Grain Commission, Winnipeg, MB, Canada; (2) Crop Development Centre, University of Saskatchewan, Saskatoon, SK, Canada

P-219. CFW 54:A73
HPLC determination of insoluble phenolic acids in selected Japanese grains: Comparison of photodiode array detector and electro- chemical detector. A. YOSHIDA (1), K. Miyagi (1), H. Ohta (1), S. Hashimoto (1). (1) Nakamuragakuen University, Fukuoka, AC, Japan
P-220. CFW 54:A41
Finger millet and sorghum phenolics: Effects on malting and malt quality and gene expression in caco-2 cells. G. DUODU (1), M. Siwela (2), J. Taylor (1), Y. Bao (3), P. Belton (3). (1) University of Pretoria, Republic of South Africa; (2) University of Kwazulu-Natal, South Africa; (3) University of East Anglia, United Kingdom

P-221. CFW 54:A61
Analysis of flavonoid compounds in commercial wild rice by HPLC-MS-MS. Y. QIU (1), Q. Liu (2), T. Beta (2). (1) University of Manitoba, Winnipeg, MB, Canada; (2) Department of Food Science, University of Manitoba, Winnipeg, MB, Canada

P-222. CFW 54:A43
Nutrient composition of retail samples of sorghum, millet, and whole wheat flour. S. E. GEBHARDT (1), R. G. Thomas (1). (1) USDA ARS BHNRC, Beltsville, MD, U.S.A.

Bioprocessing

P-223. CFW 54:A46

NIR

P-224. CFW 54:A61
Surface lipid content and color of individual milled rice kernels using near-infrared reflectance spectroscopy. J. RASH (1), M. Saleh (1), J. Meullenet (1). (1) University of Arkansas, Fayetteville, AR, U.S.A.

P-225. CFW 54:A40
Identity confirmation of a processed cereal product using near-infrared fingerprinting: The example of Belgian Trappist beer. G. DOWNEY (1). (1) TEAGASC, Ashtown, Dublin, Ireland

P-226. CFW 54:A36
Near IR focal plane array imaging determines uniformity and composition in formula feed production using an edible tracer. M. D. BOATWRIGHT (1), D. L. Wetzel (1), L. R. Brewer (1). (1) Microbeam Molecular Spectroscopy Laboratory, Kansas State University, Manhattan, KS, U.S.A.

Imaging and Microscopy

P-227. CFW 54:A47
Confocal laser scanning microscopy as a tool in the analysis of cereal products. M. JEKLE (1), T. Becker (1). (1) Technische Universität München, Freising, Germany

P-228. CFW 54:A43
Rapid product development for multi-component cereal-based foods using TD-NMR technology. S. GHOSH (1), X. tombakan (1). (1) Bruker Corporation, The Woodlands, TX, U.S.A.

P-229. CFW 54:A41
Potential of hyperspectral imaging for monitoring post-production changes in food structure. C. C. Esquerre (1), V. Di Egidio (2), A. Gowan (3), C. McDonnell (3), G. DOWNEY (1). (1) TEAGASC, Ashtown, Dublin, Ireland; (2) University of Milan, Italy; (3) University College Dublin, Ireland

Salt

P-230. CFW 54:A54
Salt influence on the fluidity of wheat flour dough: A multi-technique study. S. P. MAK (1), S. E. Hill (2). (1) Division of Food Sciences, University of Nottingham, United Kingdom; (2) University of Nottingham, Loughborough Leicestershire, United Kingdom

P-231. CFW 54:A54
Sodium NMR and measures in wheat flour doughs. S. P. MAK (1), B. MacNaughtan (1), S. E. Hill (2). (1) Division of Food Sciences, University of Nottingham, United Kingdom; (2) University of Nottingham, Loughborough Leicestershire, United Kingdom

Rice

P-232. CFW 54:A34
Cluster analysis of lowland and upland rice cultivars based on grain quality attributes. P. Z. BASSINELLO (1), O. P. de Morais (1), J. P. de Oliveira (1), M. Chen (2), A. McClung (3). (1) EMBRAPA Rice and Beans, Santo Antonio de Goias, GO, Brazil; (2) USDA, Beaumont, TX, U.S.A.; (3) USDA, Stuttgart, AR, U.S.A.

Ingredients & Cost of Goods Sold

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Novel Ingredients

P-233. CFW 54:A33
Physical, texture, and preference characteristics of pasta added with unripe banana flour. E. AGAMA-ACEVEDO (1), J. J. Islas-Hernandez (1), P. Osorio-Diaz (1). (1) CEPROBI-IPN, Yautepec, Morelos, Mexico

P-234. WITHDRAWN

P-235. CFW 54:A41

P-236. CFW 54:A45
Investigation of soba noodles prepared with tartary, green, and common buckwheat. D. W. HATCHER (1), M. Izydorczyk (1), J. E. Dexter (1), G. G. Bellido (1), C. Campbell (2). (1) Canadian Grain Commission, Winnipeg, MB, Canada; (2) Kade Research, Morden, MB, Canada

P-237. CFW 54:A35
Algae as a nutritive valuable ingredient in food. K. S. BECH (1). (1) Danish Technological Institute, Aarhus C, Denmark

P-238. CFW 54:A52
Total anthocyanin content in blue corn cookies as affected by the various acids and oven type. J. LI (1), C. Walker (1), J. Faubion (1). (1) Grain Science Dept., Kansas State University, Manhattan, KS, U.S.A.

P-239. CFW 54:A59
Modification of corn distillers dried grains with solubles (DDGS) with probiotics. P. Pathirapong (1), B. LAMSAL (2), S. Rakshit (1). (1) Asian Institute of Tech.; (2) Iowa State University, Ames, IA, U.S.A.
**Glycemic Index**

P-240. CFW 54:A51

**Bakery Products**

P-241. CFW 54:A74
Evaluation of different types of fats used in high-ratio layer cakes. J. ZHOU (1), C. Walker (1), J. Faubion (1). (1) Kansas State University, Manhattan, KS, U.S.A.

P-242. WITHDRAWN

P-243. CFW 54:A49
Development of healthful non-wheat breads fortified with antioxidant. Y. KIM (1), D. Shin (1), G. Lee (1). (1) Korea University, Seoul, Korea

P-244. CFW 54:A47

P-245. CFW 54:A67
Effect of dough conditioners on small and large deformation behavior of wheat flour doughs. S. L. STEEPLES (1), H. Dogan (1). (1) Kansas State University, Manhattan, KS, U.S.A.

P-246. CFW 54:A44
The effects of extruded lintel flours on white pan dough and bread characteristics. C. HALL (1), M. Tulbek (2). (1) Northern Crops Institute, Fargo, ND, U.S.A.; (2) North Dakota State University, Fargo, ND, U.S.A.

P-247. CFW 54:A70
Superior new enzyme technology for emulsifier replacement in bakery products. C. VAN BENSCHOP (1). (1) DSM Food Specialties USA, Inc., Delft, Netherlands

**Fiber**

P-248. CFW 54:A55

P-249. CFW 54:A71
The ingredient wheat aleurone the most valuable fraction from the outer layer of the wheat with health and technological benefits. W. VON REDING (1). (1) Buhler AG, Uzwil SG, Switzerland

P-250. CFW 54:A72
Value-added utilization of hemicellulose in distiller’s dried grains with solubles. Y. XU (1), M. A. Hanna (1). (1) University of Nebraska-Lincoln, Lincoln, NE, U.S.A.

P-251. CFW 54:A61
Dietary fibers from cereals (barley fiber, oat bran and rye bran) replacing fat in sausages. K. PETERSSON (1), O. Godard (1), A. Eliasson (1), E. Tornberg (1). (1) Department of Food Technology, Engineering and Nutrition, Lund, Sweden

**Wheat**

P-253. CFW 54:A53
Argentina, Chile, and Peru Wheat Crop Report 2008/2009. X. LOPEZ (1), N. Via (1), V. Vaqueros (1). (1) Grupo Granotec America, Santiago, Chile

P-254. CFW 54:A74
Differences in biscuit flour functionality as affected by wheat type and region of origin. J. ZIMERI (1), L. Haynes (1), N. Zhou (1), B. Zhao (1). (1) Kraft Foods, East Hanover, NJ, U.S.A.

**Sorghum**

P-255. CFW 54:A62
The development of a sorghum-based master mix. S. RUAN (1). (1) Kansas State University, Manhattan, KS, U.S.A.

P-256. CFW 54:A38
Isolation of anticancer phytochemicals obtained from black sorghum bran. R. A. CHAVEZ-SANTOSCOY (1), J. Gutierrez-U ribe (2), S. Serna-Saldívar (1). (1) Tecnologico de Monterrey, Monterrey Nuevo Leon, Mexico; (2) ITESM, Monterrey, N.L., Mexico

**Salt**

P-257. CFW 54:A74

P-258. CFW 54:A35
Effects of minimisation of sodium chloride in baked goods. M. BECK (1), M. T. Jekle (1), T. Becker (1). (1) Technische Universität München – Lehrstuhl für Brau und Getränketechnologie, Freising-Weihenstephan, Germany

**Hydrocolloids**

P-259. CFW 54:A39
The effects of selected hydrocolloid ingredients on the attributes of instant fried noodles. A. Choy (1), L. Cato (2), D. M. SMALL (3). (1) Applied Chemistry, School of Applied Sciences, RMIT University, Melbourne, Australia; (2) Department of Agriculture and Food W.A. (DAFWA), Perth, WA, Australia; (3) RMIT Univ., Melbourne, VIC, Australia

P-260. CFW 54:A64
Effect of xanthan gum and retort time on the quality of canned pasta containing nontraditional ingredients. G. K. SANDHU (1). (1) North Dakota State University, Fargo, ND, U.S.A.
Lipids

P-261. CFW 54:A65
The anti-oxidation effect of polylysine in emulsions containing polyunsaturated fatty acids. S. Scheffler (1), X. Wang (1), F. San Martin (1), Y. Yao (1). (1) Purdue University, West Lafayette, IN, U.S.A.

Engineering & Processing

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Rice

P-262. CFW 54:A58
Low temperature low relative humidity drying of rough rice. G. O. Ondier (1). (1) University of Arkansas, Fayetteville, AR, U.S.A.

Protein

P-263. CFW 54:A61
From grain to feed – Process development of high-protein fractions from grain and legume products for extruded fish feed pellets. H. Rasmussen (1). (1) Danish Technological Institute, Sdr. Stenderup, Denmark

P-264. CFW 54:A70
Effects of protease treatment on modified dry grind processes. B. C. Vidal (1), K. D. Rausch (2), M. E. Tumbleson (2), V. Singh (2) (1) University of Illinois, Urbana, IL, U.S.A.; (2) University of Illinois at Urbana-Champaign, IL, U.S.A.

P-265. CFW 54:A59
Recovering fractions of corn enriched in recombinant proteins. I. Paraman (1), P. Rayas-Duarte (1), S. Mulvaney (2). (1) Oklahoma State University, Stillwater, OK, U.S.A.; (2) Cornell University, Ithaca, NY, U.S.A.

P-266. CFW 54:A48

Extrusion

P-267. CFW 54:A63
Extrusion of aquafeeds containing DDGS with navy and pinto bean flours. K. A. Rosentrater (1), M. Tulebek (2). (1) USDA-ARS, Brookings, SD, U.S.A.; (2) Northern Crops Institute, Fargo, ND, U.S.A.

P-268. CFW 54:A38
A new engineering method for understanding extrusion cooking process. H. Cheng (1). (1) Technical University of Denmark, Lyngby, Denmark

P-269. CFW 54:A67
Application of extruded whole grains as functional food in baking and extrusion technology. V. Stojceska (1), P. Ainsworth (1), A. Plunkett (1). (1) Manchester Metropolitan Univ., Manchester, United Kingdom

P-270. CFW 54:A39
Raw material changes and their processing parameters in an extrusion cooking process. H. Cheng (1), H. Rasmussen (2), A. Friis (1). (1) National Food Institute, Technical University of Denmark, Lyngby, Denmark; (2) Renewable Energy and Transport Centre, Pilot Plant, Danish Technology Institute, Denmark

P-271. CFW 54:A69
Effects of extrusion processing on sensory attributes and shelf life of whole-grain and endosperm-only flour from three maize hybrids. M. Valladares (1), S. Weier (2), S. Cuppert (1), D. Rickett (2). (1) Department of Food Science and Technology, University of Nebraska-Lincoln, Lincoln, NE, U.S.A.; (2) The Food Processing Center, University of Nebraska-Lincoln, Lincoln, NE, U.S.A.

Bioactives

P-275. CFW 54:A46
Changes in anthocyanins and antioxidant capacity during the elaboration of tesgüino, a traditional Mexican corn beer. H. Hernandez-Sanchez (1), D. Nava-Arenas (2). (1) Escuela Nacional de Ciencias Biologicas – IPN, Mexico, DF, Mexico; (2) CeProBi-IPN, Mexico, DF, Mexico

P-276. CFW 54:A52
Sixte extraction of cholesterol-lowering compounds from sorghum DDGS as influenced by temperature of the heating system. C. Leguizamon (1), C. L. Weller (1), V. L. Schlegel (1), T. P. Carr (1). (1) University of Nebraska, Lincoln, NE, U.S.A.

Bread

P-277. CFW 54:A36
Bread-making prediction for breeders from 50 grams of flour. N. Boinot (1), O. Le Brun (1), A. Dubat (1). (1) CHOPIN Technologies, Villeneuve la garenne, France

P-278. CFW 54:A55
Gluten-free frozen doughs: Influence of freezing on proteins, dough properties, and bread quality. S. Mezaize (1), S. Chevailler (1), C. Guyon (1), A. Le Bail (1), M. de-Lamballerie (1). (1) ENITIAA – University UNAM, UMR GEPEA CNRS 6144, Nantes, France

P-279. CFW 54:A66
Addition of soy increases soft pretzel dough stability during frozen storage. A. Simmons (1). (1) Ohio State, Columbus, OH, U.S.A.

P-280. CFW 54:A42
Replacing wheat flour with lower GI ingredients in white wheat bread. E. Gallagher (1), P. Burton (1), A. Patras (1). (1) TEAGASC, Dublin, Ireland
Starch

P-285. CFW 54:A35
Small-scale and rapid starch isolation using a combination of ultrasound and sucrose gradient. M. BENMOUSSA (1), B. Hamaker (1), (1) Whistler Center for Carbohydrate Research, Dept. of Food Science, Purdue University, West Lafayette, IN, U.S.A.

P-286. CFW 54:A70
Withdrawn

P-287. CFW 54:A38
Thermal properties and heat-stable resistant starch content of corn starches after acid-methanol and heat-moisture treatments. Y. CHANG (1), J. Lin (2), C. Wen (1). (1) Providence University, Shalu, Taiwan, Republic of China; (2) MingDao University, Peetow, Taiwan, Rep of China

P-288. CFW 54:A58
Effect of spray drying conditions on the resistant starch content of unripe banana (Musa sp.) flour. R. S. ORMENES (1), A. P. Biauzzi (1), V. N. Silva (1), L. Armiliato (1), C. S. Almeida (1), A. A. Vitali (1), F. Collares-Queiroz (2), (1) Instituto de Tecnologia de Alimentos, Campinas, Brazil; (2) Faculdade de Engenharia Química – FEQ/UNICAMP, Campinas, SP, Brazil

P-289. CFW 54:A49
Optimization of amylose hydrolysis of starch in whole grain meal. A. KANDIL (1), T. Vasanthan (1), D. Bressler (1), J. Li (1). (1) University of Alberta, Dept. AFNS, Edmonton, AB, Canada

P-290. CFW 54:A68
Effect of temperature on gelatinized starch solutions with different amylose/amylopectin content. R. SULAIMAN (1), K. D. Dolan (1), J. F. Steffe (1). (1) Michigan State University, East Lansing, MI, U.S.A.

P-291. CFW 54:A74
Effects of temperature cycling and starch concentration on retrogradation of waxy and normal corn starches. X. ZHOU (1), S. Lim (1), B. Baik (2), (1) Graduate School of Life Sciences and Biotechnology, Korea University, Seoul, Korea; (2) Washington State University, Department of Crop & Soil Sciences, Pullman, WA, U.S.A.

P-292. CFW 54:A73
Physical and digestive properties of cookies using OSA rice starches with different amylopectin contents. H. YOON (1), J. Han (1). (1) Sangmyung University, Seoul, Korea

P-293. CFW 54:A48
Effects of resistant starch on the physical, sensory, and textural properties of wheat flour tortillas. T. O. JONDIKO (1), N. J. Alviola (1), L. W. Rooney (1), J. M. Awika (1). (1) Texas A&M University, College Station, TX, U.S.A.

P-294. CFW 54:A64
Effect of acid and enzymatic hydrolysis on the process to obtain resistant starch from chick-pea starch. S. B. SARMENTO (1), L. F. Polesi (2), (1) Universidade de São Paulo, Piracicaba, Brazil; (2) Universidade de São Paulo/ESALQ, Piracicaba, São Paulo, Brazil

P-295. CFW 54:A68
Development and characterization of a functional material of low digestibility of starch for being used in food processing low glycemic index. T. SUAREZ-DIEGUEZ (1), G. Palma-Orosco (2), N. Guemes-Vera (3), J. Mendoza-Perez (2). (1) Area Academica de Nutricion del Instituto de Ciencias de la Salud de la UAEM, Pachuca de Soto Hidalgo, Mexico; (2) Escuela Nacional de Ciencias Biologicas del IPN; (3) Centro de Investigaciones in Ciencia y Tecnología de los Alimentos del Instituto de Ciencias Agropecuarias de la UAEM

P-296. CFW 54:A61
Effect of different sources of potential prebiotics on starch digestibility and pasting characteristics in a flour-water system. S. RAGAEE (1), L. Ashrafi (1), I. Guzar (1), K. Seetharaman (1), (1) University of Guelph, Guelph, ON, Canada

P-297. CFW 54:A56
Effects of parboiling conditions on the slowly digestible and resistant starch fractions in parboiled rice J. ZHOU (1), S. Lim (1), B. Baik (2), (1) Graduate School of Life Sciences and Biotechnology, Korea University, Seoul, Korea; (2) Washington State University, Department of Crop & Soil Sciences, Pullman, WA, U.S.A.

P-298. CFW 54:A68
Withdrawn

Millling

P-299. CFW 54:A73

P-300. CFW 54:A37
Fractionation of wheat middlings, soybean meal and cottonseed meal using combination of sieving and air classification. R. K. CHALLA (1), R. Srinivasan (1), F. D. To (1). (1) Mississippi State University, Mississippi State, MS, U.S.A.
Bioprocessing

P-302. **CFW 54:A52**
Effect of alcohol type on degradation of cellulose treated with hydrochloric acid in alcohols. J. LIN (1), Y. Chang (2), Y. Hsu (2). (1) Department of Hospitality Management, MingDao University, Peetow, Taiwan; (2) Department of Food and Nutrition, Providence University, Shalu, Taiwan

P-303. **CFW 54:A51**
Corn mash preparation for granular starch hydrolysis for bioethanol. B. LAMSAL (1), L. Johnson (1). (1) Iowa State University, Ames, IA, U.S.A.

P-304. **CFW 54:A62**

P-305. **CFW 54:A39**
Effect of steam flaking in fusel alcohol production during fermentation with *Saccharomyces cerevisiae*. C. Chuck-Hernandez (1), E. Perez-Carrillo (1), S. O. Serna-Saldívar (1). (1) Tecnológico de Monterrey, Monterrey, N.L., Mexico

Nixtamal and Maize Tortillas

P-306. **CFW 54:A42**
Nixtamalized corn flour obtained by ohmic heating. M. GAYTÁN-MARTÍNEZ (1), E. Morales-Sánchez (2), J. Figueroa (1), H. Martínez-Flores (3), P. Vázquez Landaverde (4), M. Reyes Vega (2). (1) CINVESTAV Unidad Queretaro, Queretaro, Qro., Mexico; (2) CICATA IPN Unidad Querétaro, Mexico; (3) Facultad de Químico Farmacobiología, Universidad Michoacana de San Nicolás de Hidalgo, Mexico; (4) CICATA INP Unidad Querétaro, Querétaro, Mexico

P-309. **CFW 54:A34**
Effect of retrogradation and dehydration process on physicochemical and texture properties of maize tortillas. G. ARAMBULA-VILLA (1), A. Escalante-Aburto (2), I. Verdalet-Guzman (2), E. Gutierrez-Arias (3). (1) CINVESTAV-IPN Queretaro, Queretaro, Qro., Mexico; (2) Instituto de Ciencias Basicas, Universidad Veracruzana, Veracruz, Mexico; (3) Cinvestav-Qro., Queretaro, Qro., Mexico

Irradiation

P-310. **CFW 54:A34**
Irradiation as a tool for modifying physiochemical characteristics of rice flours and rice cake quality. B. BAIK (1), J. Lee (2), M. Byun (2), J. Kim (2), J. Kim (3), S. Lim (3). (1) Washington State University, Pullman, WA, U.S.A.; (2) Korea Atomic Energy Research Institute, Daejeon, Korea; (3) School of Life Sciences and Biotechnology, Korea University, Seoul, Korea
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Make an impact at the 2010 AACC International Annual Meeting in Savannah!

The 2010 AACC International Program Planning Team invites submission of both oral and poster presentations for the AACC International Annual Meeting to be held October 24-27 in Savannah, Georgia.

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*Percent Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.
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2009 AACC International Awardees

Congratulations to the following members selected to receive AACC International awards in honor of their significant contributions to the field of grain science. You are invited to the Awards Ceremony on September 14, 2009 to celebrate their accomplishments. Lecture times for the individual awards are noted below.

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.

Lawrence Johnson earned his Ph.D. from the Grain Science & Industry Department at Kansas State University. He spent seven years at the Food Protein R&D Center of Texas A&M University where he led their fats and oils research group. Since 1985, he has been director of the Center for Crops Utilization Research at Iowa State University, a center comprised of 50 faculty focused on developing value-added uses for crops. He has provided state and national leadership in adding value to and finding new uses for corn and soybeans. He was also recently appointed director of the ISU BioCentury Research Farm, which is an integrated research and demonstration facility dedicated to biomass production and processing. His own research program, for which he was awarded 11 patents, has led to technologies to process soybeans into edible oil and protein products, increase co-product returns in manufacturing fuel ethanol, and improve corn milling. He co-edited the monographs Corn: Chemistry and Technology and Soybeans: Chemistry, Production, Processing and Utilization, which are the world’s most complete references on corn and soybeans. He served two years on the Board of Directors for AACC International, and in 2004, he served as president of the American Oil Chemists Society.

Applied Research Award

Established in 2005, the AACC International Applied Research Award is presented to an individual or team for their significant body of distinguished contributions to the application of science in the cereals area. The award will consist of a $2,000 honorarium and a plaque. Recipients of the Applied Research Award are also accorded the status of AACC International Fellow for their contributions leading to this award. Awardees will have the opportunity to present a lecture during an annual meeting of the association.

This year’s award lecture, “Applying Basic Research in Developing Analytical Solutions,” will take place at 9:30 a.m. on Wednesday, September 16.

Barry McCleary is founder and CEO of Megazyme International Ireland Limited. He is adjunct professor at the University of Sydney, where he earned his Ph.D. and D.Sc. degrees. He has researched in many laboratories throughout the world and has written more than 100 scientific papers and book chapters. Within Megazyme, his specific aim is to develop improved analytical methodology for the cereals, food, and beverage industries. Many of the methods he developed are now world standards. The range of wine and dairy test kits that were introduced in just 2005 have already become the market leader in several countries. McCleary has received several awards for his scientific and business contributions, including the Guthrie, Wiley, and Bailey medals and the Edith A. Christensen Award from AACC International. In addition, Megazyme was named Australian Small Business of the year in 1993 and Irish Small Business “Innovator of the Year” in both 2007 and 2009. McCleary is an ISI highly-cited author.

McCleary has a passion for carbohydrate and enzyme research. Currently, his new, all-inclusive method for dietary fiber is under
international, interlaboratory evaluation and methods for alpha-
amylase and beta-amylase are under evaluation throughout Europe
and China as potential benchmarks for malt quality.

**Edith A. Christensen Award for Outstanding Contributions in Analytical Methods**

*Established in 2005, this award and $1,500 honorarium 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 AACC International.*

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**This year’s award lecture, “Dietary Fiber Methodology: AACC Intl. Approved Methods Commensurate with Dietary Fiber Research and the CODEX Definition,” will take place at 2:00 p.m. on Tuesday, September 15.**

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**Jonathan DeVries** is currently a senior principal scientist at General Mills, serving as senior technical manager for the Medallion Laboratories Division, which provides analytical services to the food industry. DeVries has been active in quality-related research and analytical work for more than 40 years, including activity in food safety, nutrition, and packaging for more than 30 years. Methods work includes dietary fiber and components (inulin, polydextrose, beta glucans, and resistant starch/maltodextrins), fats, vitamins, minerals, sugars, allergens, pesticide residues, sulfites, heavy metal residues, and natural toxins ( aflatoxin, deoxynivalenol, fumonisins). For 30 years, DeVries has been working for validation/international standardization of analytical methods through AACC International, serving as an active member of the Vitamins Committee (chair) and Approved Methods, Mycotoxins, Fats, Dietary Fiber (carbohydrates), Oat, Barley, and Near Infrared Committees. He was actively involved with developing the AACC Intl. definitions for oat bran and dietary fiber. He has also been instrumental in validation of Approved Methods of Analysis for dietary fiber and vitamins (A, E, and water soluble). He has authored numerous papers on his research topics. DeVries received his B.A. in chemistry from Augsburg College and his Ph.D. in organic chemistry from the University of Minnesota. DeVries served as AACC Intl. Annual Meeting program chair for 2008.

**Excellence in Teaching**

*The AACC International Excellence in Teaching Award is presented to a member and teacher who has made significant contributions through teaching in the broad field of cereal science and technology. The award consists of a $1,500 honorarium and plaque.*

Steve Mulvaney has three degrees in food science, but became a member of AACC International in 1988 and has been teaching various aspects of cereal science in food science courses since that time. He has always incorporated research results and activities into his teaching, e.g., how the dynamics and process control aspects of cooking extrusion affect final product properties. However, he became more interested in the material properties of the extruded cereal than the extruder itself. Thus, after moving to the Department of Food Science at Cornell University in 1990, Mulvaney learned polymer physics and polymer science principles so he could explain the interesting properties of a wide range of cereal soft solids from starch gels to dough to cereal melts. This background led to the teaching of viscoelasticity of cereal materials, including processing effects and how to measure viscoelastic properties in fundamental ways. He is chair of the curriculum committee for Food Science at Cornell and is a member of the IFT Higher Education Review Board, which reviews all applications for IFT approval for food science undergraduate programs. In 2005, he was awarded the Institute of Food Science Excellence in Teaching Award.

**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 to emphasize the importance of his or her contributions to the work of the society. Geddes served the association long and unselshly 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.*

*2008 Recipient: Jan A. Delcour, Katholieke Universiteit Leuven, Belgium*

*2009 Recipient: The name of the recipient is kept secret until being unveiled during the Awards Ceremony.*
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. The medal and $2,000 honorarium is awarded to an individual whose research in the field of cereal chemistry has contributed significantly to the progress of the science. Recipients of the Osborne Medal are accorded the status of AACC International Fellow and will have the opportunity to present a lecture during an annual meeting of the Association.

This year’s award lecture, “Basic Insights in Cereal Constituents as a Basis for Progress in Cereal Based Biotechnological Processes,” will take place at 9:30 a.m. on Wednesday, September 16.

Jan A. Delcour received his Ph.D. degree from the Katholieke Universiteit Leuven, Belgium. At Kansas State University, under the supervision of R. Carl Hoseney, he was introduced to cereal science and technology, a research area he subsequently developed at the Katholieke Universiteit Leuven. He is currently a full professor at the same university. His research and that of the team he leads focuses on generating basic insights into the starch, nonstarch polysaccharide, and protein constituents of cereals, as well as on plant and microbial enzyme systems converting such constituents. At the same time, the team focuses on applying such insights in cereal-based biotechnological processes to develop and optimize processes, develop the production of health promoting constituents, and contribute to final product organoleptic properties. Delcour is the author of more than 285 peer-reviewed publications and co-inventor of 20 patent families. He is module leader of the EU-Integrated project HEALTHGRAIN, an ISI highly cited author, and the recipient of the AACC International Northwest Section William F. Geddes Memorial Lectureship, the AACC International Excellence in Teaching Award, and the William F. Geddes Memorial Award. He serves on the Board of Directors of AACC International and is a senior editor of Cereal Chemistry.

Young Scientist Research Award

Established in 2006, the AACC International 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 AACC International. Awardees must not be older than 40 years by June 1 of the year the award is given. The recipient will receive a $1000 honorarium, a plaque, and will be encouraged to present a lecture at the AACC International meeting of the year in which the award is given.

This year’s award lecture, “Potential influence of ferulate oligomers on physiological effects of cereal dietary fibers,” will take place at 1:00 p.m. on Wednesday, September 16.

Mirko Bunzel completed his Ph.D. degree at the University of Hamburg, Germany, in food chemistry in 2001. Currently, he is an associate professor and the General Mills Endowed Land Grant Chair in Cereal Chemistry and Technology at the Department of Food Science and Nutrition at the University of Minnesota. His research focuses on non-starch polysaccharides and lignin as dietary fiber components, cereal plant cell wall chemistry, and phytochemicals resulting in more than 50 papers. He teaches Food Chemistry and Functional Foods, Cereal Chemistry and Technology, and Carbohydrate Chemistry at the undergraduate and graduate level. Bunzel was an organizer of the Ferulate ‘08 conference in St. Paul, MN, U.S.A., and was strongly involved in the organization of the European Food Chemistry conference in Hamburg in 2005. He has been research track vice-chair within the 2008 AACC International program planning team and scientific initiative track chair of “Cereal and Polymer Chemistry” within the 2009 team. Bunzel is a member of the editorial board of Phytochemistry Reviews. He has been the recipient of the Kurt-Täufel Award from the German Society of Food Chemistry, the Scientific Award of the German Society for Quality Research of Plant-Based Foods, the Scientific Award from the German Bakery Industries, and the Unilever Research Award.

Division Awards

Protein Division Best Student Paper and Poster Awards

The Protein Division selects the best protein chemistry papers presented by a student at the AACC International Annual Meeting each year. The Protein Division Best Student Paper Awards consists of an engraved plaque, an honorarium, and recognition at the annual meeting. The Best Student Poster Award consists of an engraved plaque, an honorarium, and recognition at the annual meeting.

2008 Best Student Paper Award: Leila Feiz, Montana State University
2008 Best Student Poster Award: Mary Jo Cantoria, California State University

Analytical Accuracy Awardees for 2008

Winners of AACC International’s Analytical Accuracy Awards, based on 2008 check sample results, have been announced. This is the eleventh such set of awards to be made since the AACC International Check Sample Committee approved the program. Winners have received certificates suitable for posting.

All subscribers to the various AACC International check sample series that include a proficiency testing option are eligible, whether or not they have elected the option, provided they have met the requirements for submission of results for the year involved. For each series, the award is made to the laboratory submitting the most accurate analyses. The statistical procedures used to select awardees are the same as those used to evaluate proficiency for other purposes. Awards are based primarily on the required analyses in each series. Analyses that are optional for proficiency test purposes are included if they improve the score to encourage
subscribers to include the results of optional analyses in their reports.

Series included in the 2008 awards are those shown in the list of awardees. Other AACC International check sample series for which the proficiency testing option is not now available may be added later as the number of subscribers and coefficient of variation of results warrant.

Formal entry for award competition is not necessary—all check sample subscribers to a given series are automatically eligible and entered provided they have submitted the required results on all samples for the award year. However, the same considerations apply to the Analytical Accuracy awards as to other achievement awards. Because there can be only one winner in any category and consideration is limited to those who have subscribed for the full year and submitted all required results, the results speak only to the performance of the awardee’s analyst or laboratory and not to that of many others who might be equally qualified.

Check sample subscribers or others who would like more information about the AACC International Check Sample and Proficiency Testing Service are invited to visit: www.aaccnet.org/checksample.

Series A—Hard Wheat Flour, Monthly
Bay State Milling Co., Mooresville, NC, U.S.A.

Series B—Hard Wheat Flour, Bimonthly
Permolex Ltd., Red Deer, AB, Canada

Series C—Soft Wheat Flour
Nisshin Flour Mfg., Tokyo, Japan

Series D—Feed Analyses
FFM Berhad, Port Klang Selangor, Malaysia

Series DF—Dietary Fiber
Midwest Lab, Omaha, NE, U.S.A.

Series HL and HS—Farinograph
McKee Foods Corp., Collegedale, TN, U.S.A.

Series I—Amylograph
Bay State Milling Co., Mooresville, NC, U.S.A.

Series J—Mixograph
South African Grain Laboratory, Pretoria, South Africa

Series K—Fat and Fatty Acids
General Mills Inc., Minneapolis, MN, U.S.A.

Series MBA—Microbiological Analyses (Including Pathogens)
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AACC International is proud of the many accomplishments of its members that have advanced the association and the field of grain science. Help us recognize these individuals by nominating a colleague. All members are strongly encouraged to submit nominations. Descriptions of the awards, criteria, past awardees and nomination deadlines are listed on AACCnet.

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**Bookstore: Main Terrace, Level 300**
- Monday, Sept 14 ......................... 9:00 a.m. – 3:00 p.m.
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Volunteering to serve on an AACC International committee provides opportunities to gain skills and experience as well as the chance to give something back to the cereal grains community. If you are interested in serving on a committee, please contact Susan Kohn at skohn@scisoc.org or at +1.651.454.7250 or visit www.aacnet.org. AACC International thanks the following volunteers who served on a committee this past year; your dedication is deeply appreciated!

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**Pub Panel - Book Acquisitions:**

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continued
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305*  **Bunge Milling**, 11720 Borman Dr., St. Louis, MO 63146-1000; Telephone: 1.800.528.4633, Fax: +1.314.292.2333, Web: www.bungenorthamerica.com. Bunge Milling is a primary supplier to the top food manufacturers in North America and the leading corn dry miller in the world. Bunge Milling offers unparalleled value, quality, and service. But it’s our commitment to innovation and our collaborative partnerships with the manufacturers of North America’s favorite brands that are the hallmarks of our success.


618*  **Butter Buds Food Ingredients**, 2330 Chicory Rd., Racine, WI 53403; Telephone: 1.800.426.1119, Fax: +1.262.598.9999, Web: www.bbuds.com. We use proprietary enzyme modification technology to “unlock” the potent flavor elements in butter, cream, cheese and other flavorful fats, delivering highly concentrated natural flavor in convenient powdered, paste, and liquid form. These natural dairy concentrates are used at extremely low applications levels, easy to use and stable in price. They allow the production of better tasting, more economical, healthier foods with very clean label statements. Organic forms of core products are available.

113*  **C.W. Brabender® Instruments, Inc.**, 50 E. Wesley St., South Hackensack, NJ 07606; Telephone: +1.201.343.8425, Fax: +1.201.343.0608, Web: www.brabender.com. For over 85 years C.W. Brabender® Instruments, Inc. has been the leading manufacturer of instrumentation designed for testing physical properties and quality of various materials utilized within the food industry. From sample preparation and research & development to evaluation, quality control and production, C.W. Brabender® is the choice for you.

See our ad on the back of the index tab.

809  **Cablevey Conveyors**, 2397 Hwy 23, P.O. Box 148, Oskaloosa, IA 52577; Telephone: +1.641.673.8451, Fax: +1.641.673.7419, Web: www.cablevey.com. Versatile tubular conveying without the use of air. This cable/disc technology is used for a wide variety of products – fine powders to chunks. Convey rates up to 1240 cu. ft./hr.
Numerous layout designs available using multiple inlets and discharge points. Product separation and degradation are practically eliminated. Think Cablevey Conveyors!

613** Calibre Control International Ltd, Asher Court, Lyncastle Way, Appleton, Warrington, WA4 8ST United Kingdom; Telephone: +44 1925 860401, Fax: +44 1925 860402 Web: www.calibrecontrol.com. Calibre will be demonstrating the popular C-Cell instrument for Image Analysis of cellular structures in baked products. C-Cell is now widely used in test baking and ingredient evaluation for bread and other baked products, providing transfer of objective information within the industry. Newer advanced models are now used for extruded products and confectionery.

719* California Natural Products, P.O. Box 1219, 1250 E. Lathrop Rd, Lathrop, CA 95330; Telephone: +1.209.858.2525, Web: www.cnp.com. Syrups, solids, and natural functional ingredients from grain-rice syrups, rice syrup solids, rice oligodextrins, tapioca syrups, rice milk powder. Completo (the soluble whole grain rice-powder or liquid), and Bake-Trimi – the natural rice syrup solid dough conditioner, emulsifier, and fat replacer. Organic and conventional versions are available.

812 California Raisin Marketing Board, 3445 N. First St., Suite 101, Fresno, CA 93726; Telephone: +1.559.248.0287, Fax: +1.559.224.7016, Web: www.LoveYourRaisins.com. The California Raisin Marketing Board represents the nearly 3500 raisin farmers in California. The Board’s mission is to increase demand for California Raisins by conducting marketing activities and fostering new product development. The board also funds crop and health research on behalf of the industry. Visit LoveYourRaisins.com for recipes and more information.

216* Can-Oat Milling, a Division of Viterra Inc., 1 Can-Oat Dr., Portage La Prairie, MB, R1N 3W1, Canada; Telephone: 1.800.663.6287, Fax: +1.204.857.9500, Web: www.can-oat.com. Three milling facilities strategically located in Western Canada produce a wide variety of oat and barley product. Whole Grain Oat products include flakes, flour, whole groats, and steel-cut groats. Oat bran can be custom milled to elevate the level of soluble fiber. Barley products include pearled, dehulled, flaked, and flour.

601* Cereal Ingredients, Inc., 4720 S. 13th St., Leavenworth, KS 66048; Telephone: +1.913.727.3434, Fax: +1.913.727.3681, Web: www.cerealingredients.com. Cereal Ingredients produces food particulates that add flavor, texture, and color to baked goods and ready-to-eat cereals, as well as pre-blended mixes to create added flavor and swirl effects in bread products. CII’s newest product line, Nutri-Bites®, consists of particles with special nutritional qualities such as extra levels of fiber, protein, vitamins, or minerals.

718 CE Elantech, Inc., 170 Oberlin Ave. N. Suite 5, Lakewood, NJ 08701; Telephone: +1.732.370.5559, Fax: +1.732.370.3888, Web: www.ceelantech.com. CE Elantech and Thermo Scientific introduce the NEW Flash 4000 Combustion Nitrogen/Protein Analyzer featuring true large sample (2 grams nominal for most applications) capability. Twin-Trap Technology consisting of two CO2 traps which are automatically activated and regenerated and moisture removal by a Peltier condensing device without the need for solid adsorbents.

415 CEREX AG (outside North America), Worbstrasse 164, CH-30730 Guemligen, Switzerland; Telephone: +41 31 954 0110, Fax: +41 31 954 0111, Web: www.cerex.ch. We are specialists in the processing of raw grain products into modern breakfast cereals. We offer expertise based on long experience in all the following areas: The direct and indirect expansion (by puffing and extrusion) of all types of cereals; the cooking, rolling, and roasting of flaked products; the coating, drying, and cooling of coated products; the mixing and baking of muesli-type and crunchy cereals.

419* CHOPIN Technologies, 20 Avenue Marcellin Berthelot, Villeneuve-la-Garenne, 92390 France; Telephone: +33141475079, Fax: +33141210710, Web: www.chopin.fr. Methods and equipment necessary to the quality control of grains, flours, and derivatives: test milling, moisture content, NIR analysis, starch damage, dough behavior during mixing, proofing, and heating. Accompanying services: training, adaptation of protocols and specific studies.
709 Church and Dwight Co., Inc., 469 North Harrison Street, Princeton, NJ, 08540; Telephone: 1.800.631.5591, Web: www.churchdwight.com. Church and Dwight is the manufacturer of Arm & Hammer® brand Sodium Bicarbonate, Ammonium Bicarbonate and Potassium Bicarbonate. Church and Dwight caters to the food industry offering only the highest quality bicarbonates for your end use – our special blends offer unsurpassed performance and innovation.

See our ad on the back inside cover.

506* CII Laboratory Services, 10835 NW Ambassador Dr., Kansas City, MO 64153; Telephone: +1.303.774.8262, Fax: +1.303.774.7545, Web: www.cii_lab.com. The leading cereal chemistry laboratory in the U.S. is an ISO 9001 certified laboratory providing extensive services dedicated to the grain, milling, and baking industries. Directly focused on the cereal grain industry, CII provides analytical capabilities that cater to the specific cereal chemistry needs of the food and agribusiness sectors.

503* Colloides Naturels, Inc., 1140 US highway 22, Suite 102, Bridgewater, NJ, 08809; Telephone: +1.908.707.9400, Web: www.cnlworld.com. Colloides Naturels, Inc. is the US subsidiary of Colloides Naturels International, the world’s leading manufacturer of Acacia gum. CN focuses on development of the nutritional aspects of gum acacia as a native soluble fiber source through their FIBREGUM™ and EQUACIA™ product line. "


510* Dakota Specialty Milling Inc., 4014 15th Ave. NW, Fargo, ND 58102; Telephone: +1.701.282.9656 or 1.877.282.9743, Fax: +1.701.282.9743, Web: www.dakotaspecialtymilling.com. Dakota Specialty Milling company, is a manufacturer and supplier of multigrain and whole-grain blends. The company partners with bakers as a trusted supplier for America’s leading brands of variety breads, cereals, crackers, snack foods, donuts, and granola. Products include custom whole-grain blends, specialty flours (including multigrain), batter blends, granolas, and oven-toasted ingredients.

300 Clextral Inc., 14450 Carlson Circle, Tampa, FL 33626; Telephone: +1.813.854.4434, Fax: +1.813.855.2269, Web: www.clextral.com. Clextral manufactures twin screw extruders, dryers, and complete production lines for snacks, cereals, ingredients (precooked flours, encapsulated flavors, soy/rice crisps, etc.), instant baby foods/drink mixes, meat analogs, premium petfood/treats, and many other extruded products. Many value-added products can also be made including healthy products made from whole grains, legumes, and fruits and vegetables and bi-color and co-extruded products to name a few. The range of extruders includes small scale pilot extruders for R&D to full scale production models. Clextral also has a pilot plant facility with extruders and food scientists to assist in confidential new product development and testing.

701 Domino Specialty Ingredients, One N. Clematis St., West Palm Beach, FL 33401-5551; Telephone: +1.561.336.5150, Fax: +1.561.336.5158, Web: www.dominospecialtyingredients.com. DOMINO SPECIALTY INGREDIENTS’ is a leading manufacturer producing, high quality certified organic and natural sugar, malt, molasses, honey & honey granules, rice, rice syrup, rice bran, rice flour, rice maltodextrins, specialty sugars and pharmaceutical products. We are proud offer Florida Crystals certified carbonfree™ Evaporated Cane Juice and Golden Granulated™ products.


418* David Michael & Co. 10801 Decatur Road, Philadelphia, PA 19154; Telephone: 1.800.DM-FLAVORS, Web: www.dmflavors.com. Hit Your Flavor Target Faster.* David Michael & Co. is a leading manufacturer of flavors, stabilizers, and natural colors for the food industry, with over 100 years of experience serving clients worldwide. Well known for vanilla, we offer much more, including total product development assistance. Whatever your application may be, hit your flavor target faster with David Michael.

303* Danisco USA Inc., Four New Century Pkwy., New Century, KS, 66031; Telephone: +1.913.764.8100, Fax: +1.913.764.8239, Web: danisco.com. Danisco is one of the world’s leading producers of ingredients and services for food and other consumer products. Danisco’s broad technology platform and product portfolio includes enzymes, emulsifiers, antimicrobials, antioxidants, cultures, hydrocolloids, tailored blends, and sweeteners. Key areas of expertise include improving the eating qualities and shelf life of bakery and dairy products.

708 The Dow Chemical Company P.O. Box 1206, Midland, MI 48642; Telephone: 1.800.447.4369, Fax: +1.847.548.1450, Web: www.methocelfood.com. Dow Food & Nutrition delivers healthy and convenient food solutions to help customers meet their formulation needs. Our technologies address customer and market trends with ingredients that provide choices for a healthier lifestyle, enable reduced-fat foods, and keep products looking and tasting fresh. For more information, visit us at: www.dowfood.com.
408* DSM Food Specialties USA, Inc., 45 Waterview Blvd., Parsippany, NJ 07054; Telephone: +1.973.257.8290, Fax: +1.973.257.8248, Web: www.dsm-foodspec.com. DSM Baking Enzymes is one of the world’s leading baking enzyme companies. It is our mission to create value for our customers by discovering, developing, and marketing enzymes for cereal based applications. We are committed to the baking industry and aim to be the partner of choice for the milling, bread improving, and other leading cereal based companies. We are a proactive partner who understands the challenges our customers face and helps to resolve them. DSM offers a complete Bakezyme range of both concentrated and diluted amylases, hemicellulases, oxidases, lipases, and proteases. Contact DSM today and let’s Bakezyme!


802 EnviroLogix Inc., 500 Riverside Indl. Pkwy., Portland, ME 04103; Telephone: +1.207.797.0300 or +1.866.408.4597, Fax: +1.207.797.7533, Web: www.envirologix.com. EnviroLogix is the worldwide leading provider of rapid test kits for the detection of GMOs in grains and oil seeds. Responding to the challenges posed by a globalized supply chain, the company has also developed a line of innovative food and feed safety tests, including the QuickTox Kit for Melamine.

401* Enzyme Development, 360 West 31st St., Suite 1102, New York, NY 10001-2727; Telephone: +1.212.736.1580, Fax: +1.212.279.0056, Web: www.enzymedevelopment.com. Enzymes for food applications such as animal feeds, brewing and baking, including shelf-life extension for baked goods.

419* Eurofins Scientific, Inc., 2315 N. Causeway Blvd., Ste. 200, Metairie, LA 70001; Telephone: +1.504.297.4330, Fax: +1.504.297.4335, Web: www.eurofinsus.com. Eurofins Scientific is an independent, international, multi-disciplined laboratory group staffed by world-recognized scientists, technicians, and support staff. With over 150 laboratories worldwide, Eurofins forms a bioanalytical company with unrivaled range of analytical capabilities for clients in the food, feed, petfood, animal health, plant health, nutraceutical, grain and seed industries. See our ad on page 2 and on the front of the exhibition tab.

516 Farmer Direct Foods, Inc., 511 Commercial St., P.O. Box 326, Atchison, KS 66002-0326; Telephone: +1.913.367.4422, Fax +1.913.367.4443, Web: www.farmerdirectfoods.com. Identity Assured(R) Genuine Stoneground whole wheat flours and brans (clean & heavy) from hard white or hard red wheats. High extraction Handcrafters(R) flour.

814 Fiberstar Inc., 713 St. Croix Street, River Falk, WI, 54022; Telephone: +1.715.425.7550, Fax: +1.715.425.7572, Web: www.fiberstar.net. Developed by Fiberstar, Citri-Fi has the unique functionality to improve yields, emulsification, and replace fat because of its high binding ability and low cost in use. Citri-Fi is extremely functional while the sensory benefits are unmatched because of it being non gummy, non gritty, and having other sensory benefits.

207* Firmech Inc., P.O. Box 5880, Princeton, NJ 08543; Telephone: +1.609.452.1000, Web: www.firmech.com. Firmenich, a leader in supplying flavors to the bakery and cereal industries, offers a diverse range of flavors that include bake-stable encapsulated flavors and indulgent sweet brown flavors and fruit flavors.

215* FONA International Inc., 1900 Averill Rd., Geneva, IL 60134; Telephone: +1.630.578.8600, Web: www.fona.com. FONA International creates and manufactures flavors for some of the largest food, beverage, and nutraceutical companies in the world through its state-of-the-art, 33-acre campus in Geneva, IL. FONA has established a reputation as the forward-thinking, independent solution provider in the very competitive flavor industry.

508* Fortitech, Inc., 2105 Technology Dr., Schenectady, NY 12308; Telephone: +1.518.372.5155, Fax: +1.518.372.5599, Web: www.fortitech.com. Fortitech is the world leader in the development of custom nutrient premixes for the food, beverage, and pharmaceutical industries. Fortitech premixes integrate functional ingredients from a comprehensive selection of vitamins, minerals, amino acids, nucleotides and nutraceuticals. Fortitech has facilities in the United States, Europe, Asia Pacific, South America and Mexico. For more information, visit fortitech.com.

518* FOSS North America, 8091 Wallace Rd., Eden Prairie, MN 55344; Telephone: 1.800.547.6275 or +1.952.974.9892, Fax: +1.952.974.9823, Web: www.foss.us. FOSS provides and supports analytical instrumentation for the food, agricultural, and pharmaceutical industries. The FOSS name is known in laboratories and production facilities around the world for its robust, reliable, and easy-to-use instruments. FOSS solutions are sold and supported in over 100 countries and by more than 75 dedicated distributors.

500 Fuchs North America, 9740 Reisterstown Rd, Owings Mills, MD 21117; Telephone: 1.800.365.3229, Fax: +1.410.363.1700. Web: www.baltimorespice.com. Spices and seasoning blends are used to provide processing solutions, prolonged shelf life, enhanced flavor, and visual appeal.

507 Gamay, 4717B Eisenhower Avenue, Alexandria, VA 22304; Telephone: +1.703.751.7430, Fax: +1.703.751.7433, Web: gamayflavors.com. Gamay is a top North American supplier in technology-based dairy flavor solutions for the food industry. Areas of core competence include flavor creation for natural and process cheeses,
heat stable butter, and cheese flavors for snack and bakery applications as well as premier dairy flavors for custom-designed food applications.

319 Givaudan, 1199 Edison Dr., Cincinnati, OH 45216; Telephone: +1.513.948.8000, Web: www.givaudan.com. Givaudan is the leading company in the flavor and fragrance industry with a vision to be the Essential Source of Sensory Innovation for their customers, driven by mutual passion for excellence. Through unique sensory experience and consumer insight, Givaudan provides customers with the taste and smell profiles that are key to their products’ success. Givaudan serves global, regional, and local customers around the world.

301 Gold Coast Ingredients, Inc., 2429 Yates Ave., Commerce, CA 90040; Telephone: +1.323.724.8935, Fax: +1.323.724.9354, Web: goldcoastinc.com. Gold Coast Ingredients is a full service manufacturer of flavors and colors for the food industry. We offer a wide range of natural, natural & artificial and artificial flavors in liquid, powder and spray dried forms. Kosher and organic certified flavors are available. Custom flavor and color formulations are our specialty as well as heat-stable flavors for specific needs of the baking and grain-based food industry. Gold Coast Ingredients is committed to bringing you the finest flavors and food products at a fair value delivered with service that is unsurpassed in promptness, courtesy, and consistency.

See our ad on the back of the maps tab.

519 Grain Foods CRC Ltd., P.O. Box 520, Norht Ryde, New South Wales, 1670, Australia; Telephone: +61.2.8877.7875, Fax: +61.2.8877.7839, Web: www.grainfoodscrc.com.au. Grain Foods CRC Ltd was set up to enhance value within the grains industry through the delivery of unique, higher value functional products. The company develops technologies and products that meet market needs in terms of cost, health, taste and convenience. Grain Foods uses a combination of genetic and processing technologies to enable commercialisation of differentiated grain based products across the value chain.

313 Grains for Hope, 658 220th St, Fairview, KS 66425; Telephone: +1.785.284.2155 or +1.785.285.1261, Fax: +1.785.285.2600, Web: www.grainsforhope.com. Grains for Hope produces extruded, micromutrient-enhanced fortified grain-like products to bring nutritional food to malnourished populations. A 501 c-3 not-for-profit foundation, local, national, and international food experts work with high school students in Sabetha, Kansas, to send food to Mozambique and other populations in need around the world.

501* Grain Millers, Inc., 9531 W. 78th St., Suite 400, Eden Prairie, MN 55344; Telephone: 1.800.232.6287 or +1.952.829.8819, Fax: +1.952.829.8819, Web: www.grainmillers.com. Full line of specialty grain items and multigrain blends. Wide range of flakes, flour, steel-cut pearled grains, and custom products produced from oats, barley, wheat, rye, triticale, and organic grains. Oat fiber and stabilized wheat germ/b bran blends are now available as ingredients or used in custom blends. With plants in Canada, West Coast U.S. and Midwest, Grain Millers is the only miller able to meet your needs for grain-based ingredients, grain blends, and mixes from multiple locations.

See our ad on the back of the exhibition tab.


704 Granotec North America, 1165 Glove Ave., Mountainside, NJ, 07092; Telephone: +1.908.301.1811, Fax: +1.908.301.1812, Web: www.granotec.com. Granotec offers nutrients, ingredients, laboratory services, technology transfer, and quality assurance systems, partnering with its customers in the production of healthy food. A leading supplier to the food industry in the Americas for over 25 years, Granotec has facilities in Argentina, Brazil, Chile, Ecuador, Mexico, Peru, and the United States.

705 Hayashibara International, 390 Interlocken Crescent, Broomfield, CO, 80021; Telephone: +1.303.650.4950, Fax: +1.303.650.9860, Web: www.hayashibara-Intl.com. We are the proud manufacturers of Trehalose, a natural functional sugar. We will be featuring Trehalose and its wide range of applications at our booth this year. Product samples will be available for taste testing.

712* Haubelt Laborgerate, Gartenfelderstr 29, 13599 Berlin, Germany; Web: www.haubelt-labor.de. HAUBELT Laborgeräte GmbH is producing reological flour quality testing instruments called Flourgraph E 6 and Flourgraph E 7 Haubelt equipment became ICC Standard 179 and 180. HAUBELT Laborgeräte GmbH instruments are of a high technical standard, reliable, and complied with the demand for simple and safe handling and easy to use. The Haubelt experts, who work on the R & D department, also know cereal chemistry and flour production.

700 Hesco, Inc./Dakota Organic Products, 500 19th St SW, Watertown, SD 57201; Telephone: 1.800.243.7264, Fax: +1.605.884.1133, Web: www.hesco-inc.com Hesco, Inc./Dakota Organic Products specialized in cereal grains grown in the heart of the United States grain belt and Canada. With our strategically located plants in South Dakota and Nebraska, our mission is to provide high quality, super clean organic and conventional grain and grain related products for the food industry.

815 ICC - International Association for Cereal Science and Technology, Marxergasse 2, Vienna, 1030 Austria; Telephone: +43170772020, Fax: +43170772040, Web: www.icc.or.at. ICC is a non-political, non-profit-making, non-religious organization, an independent, internationally recognised organisation of experts, a neutral forum for
all cereal scientists and technologists, a publisher of international standard methods and other publications related to our field, and an important organiser of national and international events.

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<th>Exhibitors</th>
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<tr>
<td>ICL Performance Products LP</td>
<td>622 Emerson Rd., Ste. 500, St. Louis, MO 63141; Telephone: +1.314.983.7940 or 1.800.244.6169, Fax: +1.314.918.0617, Web: <a href="http://www.astaris.com">www.astaris.com</a>. Cal-Sistent™, a new choice in calcium fortification, is engineered to be a fine powder with a narrow particle size distribution. Cal-Sistent provides fortification without impact on sensory characteristics. ICL is also featuring Levona® Brio and Levona® Opus, calcium-rich, zero sodium leavening agents. Levona has controlled release for convenient, “better-for-you” baked goods. ICL offers a complete line of phosphates and acids for leavening, shelf life, and dough conditioning of grain-based products.</td>
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<tr>
<td>InfraReady Products</td>
<td>1438 Fletcher Road, Saskatoon SK, S7M 5T2, Canada; Telephone: +1.306.242.4950, Fax: +1.306.242.4213, Web: <a href="http://www.infrareadyproducts.com">www.infrareadyproducts.com</a>. The Good We Get from Grain™. InfraReady offers a wide range of value added cereal grains, oilsseeds, and pulses. All of our products are whole grain, and custom designed to meet your needs. We have a full range of ancient and unique grains, including quinoa, spelt, Kamut® wheat, AnthoGrain™ wheat and waxy hullless barley.</td>
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<td>Innophos, Inc.</td>
<td>259 Prospect Plains Rd., Bldg. N, Cranbury, NJ 08512; Telephone: +1.609.495.2495, Fax: +1.609.860.0245, Web: <a href="http://www.innophos.com">www.innophos.com</a>. Innophos, Inc., the leading North American manufacturer of specialty phosphates, offers a complete range of food-grade phosphates for baking, beverage, dairy, meat, and nutritional supplement applications. Looking for healthy baking solutions? Discover CAL-RISE®. An easy to formulate, sodium free, calcium-based leavening. It can be used as a direct replacement for typical sodium based leavening, such as SAPP 28, and is as economical to use. CAL-RISE® may also provide a calcium health claim of “good” or “excellent” depending on formulation.</td>
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<tr>
<td>International Fiber Corp.</td>
<td>50 Bridge St., No., Tonawanda, NY 14120; Telephone: +1.716.693.4040, Fax: +1.716.693.3528, Web: <a href="http://www.ifcfiber.com">www.ifcfiber.com</a>. International Fiber Corporation gives you many ways to improve your products using Solka-Floc®, JustFiber® and Fibrex® functional fibers. We can assist you whether you want to make a fiber claim or need the functionality that fiber can offer. We have the fiber solutions to improve your product success and help manage your costs.</td>
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<td>J.R. Short Milling Co.</td>
<td>1580 Grinnell Rd., Kankakee, IL 60901; Telephone: +1.815.937.3633, Fax: +1.815.937.8806, Web: <a href="http://www.shortmill.com">www.shortmill.com</a>. J.R. Short Milling Co. is one of the largest producers of snack pellets in the United States and has two state-of-the-art production lines, a pilot-plant facility for developing new products and 20 years of experience in the extruded snack industry. Products are made from whole grains, wheat, corn, potato, rice, soy, oat, tapioca, etc. Products can be preflavored with sweet, savory, fruit or vegetable. J.R. Short also supplies corn meals/flours, bran, whole ground corn and specialty ingredients that include pre-gel flours, toasted corn/wheat brans/germs and confectionary flakes.</td>
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<td>Lab Synergy</td>
<td>374 Pulaski Hwy., Goshen, NY, 10924; Telephone: +1.845.258.1200, Fax: +1.845.258.1208, Web: <a href="http://www.labsynergy.com">www.labsynergy.com</a>. Lab Synergy is an exclusive provider of laboratory instrumentation specializing in assisting cereal grain manufacturers with their qualitative and quantitative measurements. With our instrumentation, we can quantify and characterize a variety of constituents that are present in the cereal grains “near” line. Protein content, fat, and oil content, total salt and acidity, starch damage, and flour rheology are just a few of the components that we can monitor. Please drop by our booth and ask for an on-site presentation.</td>
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<tr>
<td>Lallemand Baking Solutions</td>
<td>5494 Notre-Dame Est, Montreal, QC H1N 2C4, Canada; Telephone: +1.514.251.3620 or +1.514.251.3610, Fax: +1.514.255.6861, Web: <a href="http://www.lallemand.com">www.lallemand.com</a>. Lallemand Baking Solutions is the specialty baking ingredients business of Lallemand, the Canadian yeast and bacteria company. Lallemand Baking Solutions supplies Essential® enzyme-based dough conditioners, Fermaid® yeast-based dough relaxers, Lalvain du Jour® and Florapan® cultures to the global baking industry. Also offering, Bocker ready-to-use cultured flours in North America.</td>
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<tr>
<td>Lonza Inc.</td>
<td>90 Boroline Rd., Allendale, NJ, 07401; Telephone: 1.800.365.8324, Fax: +1.201.696.3612, Web: <a href="http://www.lonza.com">www.lonza.com</a>. Lonza produces a broad range of emulsifiers and additives for food applications. Key products include glycerol and polyglycerol esters, sorbitan esters, and polysorbates. Lonza offers Kosher, non-GMO emulsifiers, unique custom reactions and specialty lipid products. Other nutritional products include Carnipure™ Crystalline (GRAS) and Carnipure™ Tartrate (GRAS; U.S. Patent 5,073,376), as well as FiberAid® prebiotic a dietary fiber and Niacin/Niacinamide. Email: <a href="mailto:contact.allendale@lonza.com">contact.allendale@lonza.com</a></td>
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<tr>
<td>Martek Biosciences</td>
<td>6480 Dobbin Road, Columbia, MD 21045; Telephone: +1.410.740.0081, Fax:+1.410.740.2985, Web: <a href="http://www.martek.com">www.martek.com</a>. Martek is a world leader in the research and development of docosahexaenoic acid (DHA), an omega-3 fatty acid that is important throughout life. DHA is a major structural fat in the brain and eyes and supports neurological and visual health. Martek’s life’sDHA®, from a vegetarian source, is available in dietary supplements and functional foods.</td>
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<tr>
<td>Matsutani America</td>
<td>668 Philip Cir., Forsyth, IL, 62535; Telephone: +1.217.875.9819, Fax: +1.217.875.9821,</td>
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See our ad on the front of the program tab.
Web: www.matsutaniamerica.com. Fibersol-2 is a ready dispersible, tasteless source of high fiber (90 percent min. DSB) with many beneficial physiological properties. Fibersol-2 is perfect for beverages, including sports drinks and fortified waters, processed foods, baked goods, dietetic foods, fiber supplements, and functional foods.

**411** McCormick & Co., 204 Wight Ave., Hunt Valley, MD 21031; Telephone: +1.952.345.0378, Web: www.mccormick.com. McCormick will be demonstrating their Create It Center process and stop in to learn more about the new McCormick Science Institute. There will also be product sampling of new flavor and topical seasoning for cereal based snacks.

**400** Medallion Labs/General Mills, 900 Plymouth Ave., Minneapolis, MN 55427; Telephone: 1.800.245.5615, Fax: +1.763.764.4010, Web: www.medallionlabs.com. Medallion Labs, a division of General Mills, is an analytical testing facility. Since 1974, we have served thousands of clients, earning us a reputation for quality, reliability, and flexibility. Medallion’s areas of expertise include: nutritional testing, specialty fibers, microbiology testing, shelf life studies as well as sensory and product performance evaluations.

See our ad on the back of the recognition tab.

**811** Meduri Farms, Inc., P.O. Box 636, Dallas, OR, 97338; Telephone: +1.503.623.0308, Fax: +1.503.623.0726, Web: www.medurifarms.com. Meduri Farms, Inc. is a leading producer of dried specialty fruits. We are located in Oregon’s agriculturally rich Willamette Valley. Our product line includes apples, apricots, blackberries, blueberries, cherries, citrus peel, cranberries, peaches, pears, raspberries, strawberries, and other specialty fruits used as ingredients by food manufacturers around the world.

See our ad on the front of the index tab.

**208** Megazyme International, Bray Business Pl., Bray County Wicklow, Ireland; Telephone: +353.1.2861220, Fax: +353.1.2861264, Web: www.megazyme.com. Megazyme is a leading manufacturer of test kits and reagents for the food, feed, fermentation, dairy, and wine industries. These kits are used in analytical laboratories worldwide for health and nutritional labeling purposes. Our Total Dietary Fibre, Total Starch, Fructan and Beta-Glucan assay kits are world standards.

See our ad on the back of the recognition tab.

**611** The Mennel Milling Company, P.O. Box 806, Fostoria, OH 44830; Telephone: +1.419.435.8151 x210, Fax: +1.419.436.5150, Web: www.mennel.com. The Mennel Company with five flour mills in four states, is one of the leading soft wheat millers in the country and specializes in custom milling to customer needs. In addition, two of the four mills produce bread flours from both hard and spring wheats. Mills are located in Fostoria & Bucyrus, OH, Dowagiac, MI, Roanoke, VA and Mount Olive, IL.

**217** Merlin Development Inc., 181 Cheshire Ln., Suite 500, Plymouth, MN 55441; Telephone: +1.763.475.0224, Fax: +1.763.475.1626, Web: www.merlindevelopment.com. A full-service food product development and research company providing support from concept to commercialization.

**109** MGP Ingredients, 100 Commercial Ave, PO Box 130, Atchison, KS, 66002-0130; Telephone: +1.866.547.2122, Fax: +1.913.367.0192, Web: www.mgpingredients.com. Founded in 1941 and headquartered in Atchison, Kansas, MGP Ingredients, Inc. produces ingredient solutions derived from wheat for a multitude of bakery and processed food applications. These principally consist of instant, cook-up and RS4 resistant starches, protein isolates and concentrates, and textured proteins that provide functional, nutritional and sensory benefits.


**212** Mother Murphy’s Laboratories, 2826 S. Elm St., Greensboro, NC 27406; Telephone: +1.336.273.1737 or 1.800.849.1277, Fax: +1.336.273.2615, Web: www.mothermurphys.com. Mother Murphy’s has a history of creating high quality flavorings and extracts since 1946. We offer a complete portfolio of creative and innovative flavorings available in both liquid and dry forms to complement any application imaginable. Come ask us about our new reaction flavors available for many grain based products.

**514** National Starch Food Innovation, 10 Finderne Ave., Bridgewater, NJ 08807; Telephone: +1.866.961.6285, Web: www.foodinnovation.com. National Starch Food Innovation is a leading global supplier of nature-based functional and nutritional ingredient solutions to the food and beverage industries. The company has a strong focus on delivering innovation to meet market and consumer trends in wholesome and natural; texture, nutrition, wellness, vitality and extensive, award-winning product range, market knowledge and technical expertise makes National Starch Food Innovation a partner of choice for the next generation of food producers.

**614** Navas Instruments, 105 Wind Tree Ln., Conway, SC 29526; Telephone: +1.843.347.1379, Fax: +1.843.347.2527, Web: www.navas-instruments.com. Manufacturer of high performance, easy to maintain multiple sample moisture ash analyzers, with external balance as option for increased productivity, also quick moisture ash analyzers, with external balance, DSC and RSO resistant starches, protein isolates and commercialization.

**513** Northern Crops Institute, North Dakota State University, NDSU Dept. 7400, P.O. Box 6050, Fargo, ND 58108-6050; Telephone: +1.701.231.6538, Fax: +1.701.231.7235, Web: www.northern-crops.com. Northern Crops Institute (NCI) provides education and technical services to the food
industry that assist in expanding domestic and international markets for northern-grown U.S. crops. NCI specializes in baking, crop quality, pilot-scale extrusion, pilot-scale milling, feed manufacturing, and pilot-scale pasta manufacturing in a confidential atmosphere.

**203** NP Analytical Laboratories, Checkerboard Sq., St. Louis, MO 63164; Telephone: +1.800.423.6832 or +1.314.982.1310, Fax: +1.314.982.1078, Web: www.npal.com. NP Analytical Laboratories provides comprehensive testing of foods and ingredients for 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 are also offered.

**805** Nutraceuticals World, 70 Hilltop Rd., Ste. 3000, Ramsey, NJ 07446; Telephone: +1.201.825.2552, Fax: +1.201.825.0553, Web: www.nutraceuticalsworld.com. Nutraceuticals World is the premier magazine serving the global dietary supplement, functional food, nutritional beverage, and sports nutrition industries. By providing valuable information on ingredient sourcing, marketing trends, new product launches, packaging, manufacturing equipment, industry trends, Nutraceuticals World is an important resource for industry executives worldwide. Our weekly E-Newsletter “Nutraceuticals World NOW” offers exclusive online articles. Visit www.nutraceuticalsworld.com for the most timely industry news and subscription information.

**213** Oat Ingredients, LLC, 4368 Park Ct., Boulder, CO 80301-3964; Telephone: +1.303.818.1117, Fax: +1.413.385.9391, Web: www.oatingredients.com North American import, distribution and sales of OATWELL® Oat Bran, Oat Flour, and Oat Oil ingredients. OATWELL High fiber brans to 28% soluble fiber - beta glucan and 50%+ TDF, provide the basis for FDA heart health claims, weight management applications, low GI and digestive health. Now introducing for 2009 – OatWell 22 Oat Bran.

**616** Oilseeds International Ltd., 8 Jackson St. San Francisco, CA 94111; Telephone: +1.415.956.7251, Fax: +1.415.394.9023, Web: www.OilseedsSF.com. Oilseeds International Ltd. is the pioneer in the worldwide expansion of Oleic Safflower Oil, Oleic Sunflower Oil, and Rice Bran Oil. We provide leadership in promoting and processing various vegetable oils. For over 20 years, High Oleic Sunflower oil and High Oleic Safflower oil have been used in functional food applications as an ingredient in dairy substitutes, a spray oil for dried fruits, cereals and granola, a salad or frying oil and in manufacture of confectionary products. Rice bran oil offers several unique properties that make it very interesting as a specialty oil in niche markets. It has a very appealing nut-like flavor and once extracted is very stable with good fry-life. But perhaps its most notable feature is its high level of components with nutraceutical value such as gamma-oryzanol and tocotrienols.

**404** Omega Protein, 2105 City West Blvd., Suite 500, Houston, TX 77042; Telephone: +1.713.623.0060, Fax: +1.713.940.6111, Web: www.omegapure.com. OmegaPure® products are rich in long-chain omega-3 fatty acids (EPA and DHA) made from menhaden, a sustainable resource harvested in U.S. waters. We offer innovative delivery systems for fortifying food products including: OmegaPure® High Stability Oils, Custom Ingredients’ OmegaBits (Bakery Inclusions) and Meadowpure UltraRad Fish Oil and Flax blend.

**505** PB Leiner, P.O. Box 654, New Hope, PA 18938; Telephone: +1.215.862.6680, Fax: +1.215.862.6681, Web: www.gelatin.com. PB Leiner is a major producer of porkskin, beefskin, and bone gelatins for food, pharma, and photo applications. As a leader PB has a superior technical support staff available to help customers with innovative applications such as low carbohydrate, high protein, and low GI products. Besides its multi-functionality and non-allergenicity, gelatin is a natural, easily digestible protein, free of fat, cholesterol and carbohydrates.

**314** Penford Food Ingredients Co., 7094 S. Revere Pkwy., Centennial, CO, 80112; Telephone: +1.303.649.1900, Web: www.penfordfoods.com. Penford Food Ingredients offers unmodified and modified potato, tapioca, corn, high amylose, waxy maize and rice starches in cook up and pregelatinized format for coatings & batters, meats, dairy products, candy & confections, bakery applications and soups/sauces/gravies, including many “natural” starches, physically modified Natureite® starches and starches for gluten-free products.


See our ad on page 1.

**206** PGP International, 351 Hanson Way, P.O. Box 2060, Woodland, CA 95776; Telephone: +1.530.662.5056 or 1.800.333.0110, Fax: +1.530.662.6074, Web: www.pacgrain.com. PGP International is a leading supplier dedicated to bringing you high-quality food ingredients used to develop good tasting nutritional food products. PGP International is able to produce highly customized products into healthy ingredients that include crisp rice, extruded particulates, protein crisps, rice flours and blends, millet and sorghum flours and a line of functional grain-based ingredients called PAC products. PGP International also offers Nutri Sperse, a line of nutritional bases and rice bran. Our natural and healthy ingredients can be found worldwide in high-profile brands that include the bar, baking, beverage, confectionery, meat, nutritional, prepared foods, ready-to-eat cereal, and snack sectors.
308 Primera Foods, 612 S. Eighth St., Cameron, WI 54822; Telephone: +1.715.458.4075, Fax: +1.715.458.4078, Web: www.primerafoods.com. Committed to providing high quality products, service, and innovation at competitive prices, Primera Foods is the answer to all your egg needs. Our product line includes dried, liquid and highly functional egg products. We also offer rice and tapioca maltodextrins and syrup solids along with agglomerated and custom spray-dried ingredients.

714 Pizzy’s Nutritional, 5951 McKee Road, Fitchburg, WI 52719; Telephone: +1.877.804.6444, Fax: +1.608.316.8504, Web: www.pizzys.com. Pizzy’s Nutritional is North America’s largest, most advanced processor of flaxseed ingredients. Pizzy’s unparalleled expertise has created great tasting Omega-3 solutions for a wide range of applications. UltraGrad, its latest innovation, features ALA, EPA, and DHA with fiber and antioxidants for an easy, stable, great tasting solution.

716 Procon Technologies, Inc., 530 Industrial Dr., Naperville, IL 60563-3935; Telephone: +1.630.357.8540, Fax: +1.630.357.4918, Web: www.procontechnologies.com. Procon is the exclusive North American distributor for NIR-Online GmbH of Waldorf, Germany. NIR-Online systems measure and analyze incoming and in-process properties of cereal grains, oil seeds, dairy products, meat products, and beer and wine. These properties include fat, water, protein, crude fibre, oil, amino acids, free fatty acids, alcohol, and caffeine amongst others.

703 Quali Tech, Inc., 318 Lake Hazeline Dr., Chaska, MN 55318; Telephone: +1.952.448.5151, Fax: +1.952.448.3603, Web: www.qualitecho.com. Innovative Flavor Particulate Ingredients including Flavor-ettes, Flavor Islands, Pell-ettes, PepR and Season-ettes where virtually any color and/or flavor can be created through engineered formulas allowing for fruit content, non-GMO, non-Trans, Sugar Free and Organic systems. Also showing 100% natural Flav-R-Grain Toasted Corn Germ for utilization in almost any baking application where a natural roasted or nutty profile is desired.

717 R-Biopharm, Inc., 7950 Old US 27 S., Marshall, MI 49068; Telephone: +1.269.789.3033, Fax: +1.269.789.3070, Web: www.r-biopharm.com. R-Biopharm is a leading developer of test solutions for food and feed analysis. R-Biopharm test kits offer high precision and accuracy, key requirements where consumer health is at risk. The use of R-Biopharm test kits to screen for mycotoxins, hormones, antibiotics, genetically modified material, specified risk material, allergens and pathogens is fast, reliable and, above all, cost-effective. R-Biopharm recently released the first test kit on the market for the detection of gluten fragments in beer, syrup, and starch.

210 Research Products Co., 1835 E. North St., P.O. Box 1460, Salina, KS, 67402-1460; Telephone: +1.785.825.2181, Fax: +1.785.825.8908, Web: www.researchprod.com. Serving the milling and baking industries worldwide since 1970, Research Products Company, a division of McShares, Inc., manufactures premium food additives, including standard-setting flour bleaching and maturing services, essential vitamin and mineral premixes, custom blending, micro-ingredient dispensing systems, complete analytical laboratory testing and a full service field service team.

RIBUS, Inc., 8000 Maryland Avenue, Suite 460, St. Louis, MO 63105; Telephone: +1.314.727.4287, Fax: +1.314.727.1199, Web: www.ribus.com. Since 1992 RIBUS has offered a variety of “problem solving” rice-based specialty ingredients to help you: clean up your label (remove Si02), remove allergens (soy), increase yield, manage water activity, improve texture and mouth feel (especially in Gluten-Free products), and lower overall cost. RIBUS is best known for its Lecithin Replacer that gives you all of the functionality without any of the allergens. RIBUS products are All-Natural, Non-GMO and Certified Kosher; also available in Certified Organic forms.

Riviana Foods Inc., 2777 Allen Pkwy., Houston, TX 77019; Telephone: +1.713.529.3251, Fax: +1.713.529.1661, Web: www.riviana.com. Riviana offers a variety of rice products that include white, parboiled, brown, instant rice, wild rice, milled rice, crisp rice, and rice flour. We are a full service rice supplier.

Romer Labs, Inc. 1301 Stylemaster Ln., Union, MO 63084; Telephone: +1.636.583.8600, Fax: +1.636.583.6553, Web: www.romerlabs.com. Romer Labs® is a leading provider of diagnostic solutions including mycotoxins and GMO tests for the agricultural, food and feed industry. Our broad range of innovative tests and services play a pivotal role in integrated food safety solutions to “Make the Worlds Food Safer™” Romer Labs® aims to be at the forefront of diagnostic technology and constantly expands its product and service portfolio to continually meet the evolving demands of its customers.

Sensient Flavors LLC, 5600 W. Raymond St., Indianapolis, IN 46241-4343; Telephone: 1.800.445.0073, Fax: +1.317.244.6076, Web: www.sensient-tech.com. Sensient Flavors, a leading global flavor company offers extensive flavor solutions including Vanilla, Sweet Brown Flavors, Fruit Flavors, DairyBoost® Milk & Cream flavors, Chocolate Enhancers, and Masking Flavors for grain and sweet based applications.
Exhibitors

515 Sensient Food Colors, 2515 North Jefferson Ave., Saint Louis, MO, 63106; Telephone: 1.800.325.8110, Fax: +1.314.286.7160, Web: www.sensientfoodcolors.com. As the global leader in color innovation, only Sensient® is capable of delivering global scope, expertise, and resources in the realm of supply, development, manufacture, and application of exact shades in natural colors. Our Fusion Precise Natural Colors™ bring together over 100 years of expertise in color science and formulation.

810* SensoryEffects®, 24 N. Clinton Street, Defiance, OH 43512; Telephone: +1.217.857.3131, Fax: +1.217.857.3092, Web: www.sensoryeffects.com. SensoryEffects® offers a wide range of functional ingredient delivery systems designed for specific functionality in a variety of bakery and processed food systems: SensoryEffects® Fat-Based Inclusions; Encap® Cake Emulsifier; Cereal-Based Ingredients & Inclusions; Creamer Bases (Richmix® and Jerzee® brands); Powdered Vegetable Shortenings & Fats (Centennial® brand); Whipping & Dessert Systems; Organic & Non-GMO Specialties.

304 Siemer Specialty Ingredients, 201 W. Main, Teutopolis, IL 62467; Telephone: +1.217.857.3131, Fax: +1.217.857.3092, Web: www.siemerspecialtyingredients.com. Siemer Specialty Ingredients is a manufacturer of Natural Specialty Heat Treated Flours for use in various applications. Replacing Modified Food Starches & Gums, improving Batters/Breading, Low Micro Flour, Natural Cake Flour, and Stabilized Germ & Stabilized Bran for nutritional addition

706 Solae LLC, 4300 Duncan Ave., St. Louis, MO 63110; Telephone: +1.314.659.3820, Fax: +1.314.659.5820, Web: www.solae.com. Solae is a leader in innovative soy-based ingredients for the food, meat and nutritional products industries. We provide solutions that deliver a unique combination of functional, nutritional and economic benefits. At Solae, innovation begins with nature. We take one of nature’s best resources—the soybean—and create unique combinations of functional, nutritional and economic benefits in food products.

311 Target Flavors, Incorporated, 7 Del Mar Drive, Brookfield, CT 06804; Telephone: +1.800.538.3350, Web: www.targetflavors.com. Target Flavors, established 1981, is a full-service flavor house. Current focus is on Health and Wellness market sectors with emphasis on Cereal, Bakery and Snack products. Our specialty flavor systems include enhancers, shelf-life extenders and flavors uniquely designed to address challenging issues of process tolerance and undesirable tastes.


318* Texture Technologies Corp., 18 Fairview Rd., Scarsdale, NY 10583-2136; Telephone: +1.914.472.0531, Fax: +1.914.472.0532, Web: www.texturtechnologies.com. The TA.XTplus texture analyzer system provides complete tests for all forms of cereal products. Among the attributes it quantifies are dough and gluten extensibility, dough stickiness, bread freshness, pasta firmness and stickiness, pizza dough and crust firmness and toughness, tortilla freshness and bendability, snack food crunchiness, breakfast cereal bowl life, cookie and cake firmness, and much more. The TA.XTplus can even simultaneously quantify the acoustic profile of a product. Please visit our table top to learn what our system can do for you.

316* Stable Micro Systems, Vienna Court, Lammas Road, Godalming Surrey, GU7 1YI, United Kingdom; Telephone: +44 1483 427345, (Fax: +44 1483 427600, Web: www.stablemicrosystems.com. Stable Micro Systems’ major products, the TA.XTplus and TA.HDplus texture analysers, can be used to test materials and ingredients, semi-finished and finished products with force measurement of up to 750kg. Textural properties such as hardness, adhesiveness, brittleness and extensibility can be quantified. Volume measurement of baked product with the VolScan Profiler is another major extension to the company’s portfolio of characterisation instrumentation.

407† SunOpta Grains and Foods Group, 3824 S.W. 93rd St., P.O. Box 128, Hope, MN 56046; Telephone: 1.800.597.2997, Web: www.sunopta.com. SunOpta Grains and Foods Group specializes in sourcing, processing, and distributing “good for you” functional, natural, and organic food products. Vertical integration allows us to monitor the growth of the identity preserved crops used in our ingredients and offered as whole grains for the food and feed industries.

409* SunOpta Ingredients Group, 100 Apollo Drive, Chelmsford, MA, 01825; Telephone: 1.800.363.6782, Fax: +1.787.276.5125, www.sunopta.com/ingredients. SunOpta Ingredients is the world’s largest producer of natural and sustainable oat fibers for the food industry. SunOpta also offers soy fibers, stabilized brans (oat/wheat/corn), stabilized wheat germ and bran/germ blends, Barley Balance™ beta-glucan soluble fiber, Multifiber™ Blends (insoluble and soluble fiber blends), ingredient systems and specialty starches.

402* Tate & Lyle, 2200 E. Eldorado St., Decatur, IL 62521; Telephone: +1.217.423.4411, Web: www.tateandlyle.com. Tate & Lyle is a world-leading renewable food and industrial ingredients company, serving a global market from over fifty production facilities throughout the Americas, Europe, and South East Asia. Tate & Lyle’s range of leading branded food ingredients includes SPLENDA® Sucralose, PROMITOR™ Dietary Fiber and STA-LITE® Polydextrose. SPLENDA® is a trademark of McNeil Nutritional, LLC.

715 TexVol Instruments AB, Box 45, Viken, 260 40, Sweden; Telephone: +46 70 7 286077, Fax: +46 42 237006, Web: www.texvol.com. TexVol Instruments specialises in the development and marketing of analytical instruments for the food industry, with particular focus on texture and volume analysis. The instruments are comprehensive but still easy to use. The instruments are used globally by a large number of varying companies.
205* TIC Gums, 10552 Philadelphia Road, White Marsh MD 21162; Telephone: 1.800.899.3953 or +1.410.273.7300, Fax: +1.410.273.6469, Web: www.ticgums.com. TIC Gums is 100 years strong! We are celebrating our 100 year anniversary this year at home with AACC International in Baltimore. TIC Gums provides texture and stabilization solutions to the bakery and grain industries. Gums not only provide soluble dietary fiber but also boost viscosity, provide moisture control, improve product stability, and increase mouth feel.


804 U.S. Pharmacopeia, 12601 Twinbrook Parkway, Rockville, MD 20852; Telephone: +1.301.816.8189, Fax: +1.301.816.8301, Web: www.usp.org

502 Van Drunen Farms, 300 W. 6th Street, Momence, IL, 60954; Telephone: +1.815.472.3100, Fax: +1.815.472.3850, Web: www.vandrunenfarms.com. Van Drunen Farms supplies an extensive line of conventional and organic dehydrated, whole-food fruits, vegetables, herbs, and other all-natural ingredients, and IQF herbs and specialty vegetables, for use in a variety of applications spanning the processed food industry.

608* VITAMINS, INC., 200 East Randolph Dr., Ste. 5130, Chicago, IL 60601; Telephone: +1.312.861.0700, Fax: +1.312.861.0708, Website: www.vitamins-inc.com. Since its founding in 1936, VITAMINS, INC. has been an innovator in producing vitamins, premixes, defatted wheat germ flour, granules & nuggets and wheat germ oil. Our products are produced and marketed for the domestic and international markets, targeting the food, pharmaceutical and cosmetic industries.

606 Watson Inc, 301 Heffernan Dr., West Haven, CT 06516; Telephone: +1.203.932.3000 or 1.800.388.3481, Fax: +1.203.932.8266, Web: www.watson-inc.com. Watson manufactures a full range of standard enrichment blends or we can custom formulate a vitamin/mineral premix to achieve the nutritional profile you desire. Watson also manufactures a full line of functional bakery ingredients. Watson has two production facilities in Connecticut and Illinois as well as three in-house labs for R&D and QC.

See our ad on the front of the recognition tab.

117* Wenger Manufacturing, Inc., 714 Main St., Sabetha, KS 66534; Telephone: +1.785.284.2133, Fax: +1.785.284.3861, Web: www.wenger.com. Wenger will be supplying literature and technical information on extrusion and drying equipment for the cereal and snack industry.

See our ad on the back cover.

607 WILD Flavors, Inc., 1261 Pacific Ave., Erlenger, KY, 41018; Telephone: +1.854.342.3600, Fax: +1.854.342.3610, Web: www.wildflavors.com. WILD Flavors, Inc. delivers innovative flavor, health & wellness ingredients, natural colors, and ingredient system & process technology solutions to the food industry. As leading experts, WILD offers OnlySweet™ Stevia Extracts thanks to a recent partnership with Sunwin International Neutraceuticals, along with taste modification technologies to perfect the sweet profile.


See our ad on the front of the maps tab.
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